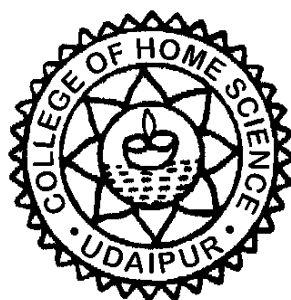


B.Sc. (Hons.) Community Science

Syllabus



**COLLEGE OF COMMUNITY AND APPLIED SCIENCES
Maharana Pratap University of Agriculture and
Technology, Udaipur – 313 00**

Semester Wise Course Distribution

First Year B.Sc. (Honours) Community Science

I-SEMESTER

S. No.	Course Title	Course No.	Credit Hours	Page No.
1.	Food Science and Processing	FSN 111	3(2+1)	4
2.	Fundamentals of Human Development	HDFS 111	2(2+0)	6
3.	Fundamentals of Art and Design	RMCS 111	3(2+1)	7
4.	Extension and Rural Development	EECM 111	2(2+0)	9
5.	Textile Science and Fabric Care	TAD 111	3(2+1)	10
6.	General English-I	ENG 112	2 (1+1)	12
7.	Environmental Studies and Disaster Management	RMCS 112	3(2+1)	13
8.	National Services Scheme/NCC/NSO	NSS/NCC	-	-
Total			18 (13+5)	

II-SEMESTER

S. No.	Course Title	Course No.	Credit Hours	Page No.
1.	Elementary Human Physiology	FSN 121	3(2+1)	15
2.	Principles of Biochemistry	FSN 122	3(2+1)	16
3.	Life-Span Development	HDFS 121	3(2+1)	18
4.	System Dynamics and Management of Resources	RMCS 121	2(1+1)	19
5.	Women in Agriculture	EECM 121	2(2+0)	20
6.	Fundamentals of Clothing Construction	TAD 121	3(1+2)	21
7.	Technical Writing (English)	ENG 121	2 (1+1)	23
8.	Agricultural Informatics	COMP 121	3(1+2)	24
9.	National Services Scheme/NCC/NSO	NSS/NCC	-	-
Total			21 (12+9)	

Second Year B.Sc. (Community Science)

III-SEMESTER

S. No.	Course Title	Course No.	Credit Hours	Page No.
1.	Principles of Human Nutrition	FSN 211	3(2+1)	25
2.	Food and Nutrition Policy and Agriculture	FSN 212	2(2+0)	27
3.	Fundamentals of Food Microbiology	MBIO 211	3(2+1)	28
4.	Marriage and Family Dynamics	HDFS 211	3(2+1)	29
5.	Financial Management and Consumer Education	RMCS 211	2(1+1)	31
6.	Information and Communication Technology	EECM 211	3(1+2)	33
7.	Techniques of Fabric Construction	TAD 211	3(1+2)	35
8.	Elementary Statistics	STAT 211	3(2+1)	36
9.	National Services Scheme/NCC/NSO	NSS/NCC	–	–
Total			22(13+9)	

IV-SEMESTER

S. No.	Course Title	Course No.	Credit Hours	Page No.
1.	Normal and Therapeutic Nutrition	FSN 221	3(2+1)	38
2.	Food Standards and Quality Control	FSN 222	3(2+1)	39
3.	Developmental Challenges in Children	HDFS 221	3(2+1)	40
4.	Communication Skills and Personality Development	HDFS 222	3(2+1)	41
5.	Housing and Space Management	RMCS 221	3(2+1)	43
6.	Ergonomics and Appropriate Technologies	RMCS 222	2(1+1)	45
7.	Diffusion and Adoption of Homestead Technologies	EECM 221	3(2+1)	46
8.	Textiles Finishes, Dyeing & Printing	TAD 221	2(1+1)	47
9.	National Services Scheme/NCC/NSO	NSS/NCC	–	–
Total			22(14+8)	

Third Year B.Sc. (Community Science)**V-SEMESTER**

S. No.	Course Title	Course No.	Credit Hours	Page No.
1.	Food Hygiene and Sanitation	FSN 311	2(1+1)	49
2.	Clinical Nutrition and Dietetics	FSN 312	3(2+1)	50
3.	Family Counseling and Welfare	HDFS 311	3(2+1)	52
4.	Residential and Commercial Space Design	RMCS 311	3(2+1)	53
5.	Economics and Marketing	RMCS 312	3(2+1)	54
6.	Introduction to Rural Sociology	EECM 311	2(2+0)	56
7.	Garment and Accessory Designing	TAD 311	3(0+3)	57
8.	Retailing and Merchandizing- Textiles and Apparel	TAD 312	2(1+1)	58
Total			21(12+9)	

VI-SEMESTER

S. No.	Course Title	Course No.	Credit Hours	Page No.
1.	Community Nutrition and Education	FSN 321	3(2+1)	59
2.	Food Analysis	FSN 322	3(1+2)	60
3.	Educational Psychology and Early Childhood Education	HDFS 321	3(2+1)	62
4.	Entrepreneurship Development and Business Management	RMCS 321	3(2+1)	63
5.	Programme Development for Rural Families OR Project Management	EECM 321 EECM 322	3(1+2)	65 66
6.	Extension Training Management	EECM 323	3(1+2)	67
7.	Traditional Textiles and Costumes of India	TAD 321	3(2+1)	68
Total			21(11+10)	69
SEMESTER VII (common course)				
Student READY Programme : Module 1* OR Module 2**			20	

First Year B.Sc. (Honours) Community Science
I-SEMESTER

FSN 111

Food Science and Processing

3 (2+1)

Theory

S. No.	Topics	No. of lectures
1	Objectives of cooking, processing, preservation, methods of cooking with their merits and demerits. Effect of cooking and heat on nutritive value of foods	2
2	Cereals, millets and pulses: Composition and nutritive value, types, storage, processing	2
3	Cereal cookery: Gluten and factors affecting the gluten formation, cereal starch, gelatinization, dextrinisation	2
4	Pulse and legumes cookery. Composition, Effect of heat, acid and alkali on cooking of pulses, factors affecting cooking quality, toxic constituents in pulses, processing of pulses	3
5	Nuts and oilseeds- Composition and nutritive value, types, storage, oil extraction, processing, toxic constituents and role in cookery	2
6	Milk and milk products: Composition and nutritive value, properties, processing and packaging, effect of heat, acid, enzymes, microbes, processed and indigenous milk products and their quality, role in cookery	3
7	Eggs- Structure, composition and nutritive value, storage, grading and evaluation of quality of egg, role of egg in cookery	2
8	Flesh foods- Structure, composition and nutritive value, types, storage, evaluation of quality and selection of meat, fish and poultry, methods of cooking, brief description of ageing, tenderization and curing	3
9	Vegetables and fruits: Composition and nutritive value, types, storage, selection, post-harvest changes, effect of processing, preservation and cooking on different pigments of both fruits and vegetables	3
10	Sugar and its products: Composition and nutritive value, type, function, properties, stages in sugar cookery, role of sugar in cookery	2
11	Fat and oils, Composition, nutritive value, types, role in cookery and importance in daily diet	2
12	Spices and herbs, Types and its use	1
13	Beverages and appetizers, Classification, use in everyday lives with special reference to tea, coffee, cocoa and alcoholic drinks	2
14	Leavening agents, classification and functions	2
15	Processed and convenience foods, Ready to eat foods, frozen foods, dehydrated foods, instant food mixes	1
	Total	32

Practical

S. No.	Experiments	No. of Practicals
1.	Laboratory conduct and responsibilities; knowledge of different food stuffs in English, Hindi and local language	1
2.	Terms used in cookery, weights and measures; identification and use of different kitchen items and equipments	2
3.	Identification and listing of various food groups; market survey of processed and preserved foods	2
4.	Cereal cookery :Preparation of plain rice (open and pressure cook), lime-rice, pulao, paratha, chapatti, upma and halwa	1
5.	Pulse cookery: Preparation of plain dal, dal with green, pakoras, sambar, Preparation of cereal and pulse combined recipes- Idlis, adai	2
6.	Nuts and oilseeds: Preparation of chikki, til ladoos, thandai,	1
7.	Milk cookery: Preparation of curd and paneer	1
8.	Egg cookery: Selection of egg, preparation of boiled egg, scrambled egg, poached egg	1
9.	Fruits and vegetables cookery: Preparation of sauces, pickles, squash, chips, Sabjis and salad	1
10.	Sugar cookery : Preparation of fudge and fondent, Process of caramalization; demonstration of 1-thread and 2-thread consistency	1
11.	Fats and oils : Preparation puris, cakes and biscuits	1
12.	Appetizers, Preparation of red tea, white tea, coffee, egg nog	1
13.	Visit of food industries	1
	Total	16

Suggested Readings

- Potter, N.N. (1996). Food Science. The AVI Publishing Company, Inc., Westport, Connecticut.
- Sehgal, S., Grewal, R.B., Kawatra, A. and Kaur, Y. (1997). Practical Aspects of Food Preservation. Directorate of Publications. Haryana Agricultural University, Hisar.
- Khadder V., (1999), Text book of Food, Storage and Preservation. Kalyani Publishers, New Dehi.
- Kalia, M. and Sood, S. (2010). Food Preservation and Processing. Revised Edition, Kalyani Publishers, New Delhi.
- Jood, S. and Khetarpaul, N. (2002). Food Preservation. Geeta Somani Agrotech Publishing Academy, Udaipur.
- Sivasankar, B. (2002). Food Processing and Preservation. PHI Learning Pvt. Ltd. Delhi.

Objectives

1. To orient the students regarding basic concepts, issues and theories of human development.
2. To give brief orientation regarding research with human beings.

S. No.	Course title	Credit hours
1.	Human development as a field of study, History of study of Human Development	2
2.	Scope and importance of study of human development from a life-span perspective	2
3.	Relationship of the discipline of human development with other disciplines of study	1
4.	Definition of growth and difference between growth and development, determinants of human growth and development; principles of human growth and development	2
5.	Genetic basis and concepts associated with human life	2
6.	Stages of human development	2
7.	Domains of human development and its , Latest issues in human development	3
8.	Brief orientation to Theories of human development: Naturalism. Environmentalism, Maturational, Need, Ecological, Ethological, Cognitive, Social, Psychoanalytical, Language and Moral	6
9.	Origins of scientific inquiry	1
10.	Research involving humans: Definition of ethics and research, practical and ethical principles and concerns in research with human subjects. Ethical trends and challenges.	2
11.	Basic concepts of Research :Variables, Hypothesis, Sampling, Operational definitions	3
12.	Research designs	3
13.	Methods of data collection- Their merits and demerits,	3
	Total	32

Suggested Readings

1. Berk, E. L. (2013). Exploring life span development.3rded. McGraw Hill, New York.
2. Santrock, J. (2012). Life span development. 14thed. McGraw Hill, New York.
3. David, M.T., Garavan, L. and Dooley, M. 2012. Fundamentals of human eesource development. *SAGE Publications Ltd*
4. James, M. and Nelson. (2009). Fundamentals of human development, religion, and spirituality. Oxford Higher Education.
5. Papalia, D.E. and Olds, SW. (2008). Human development. 11thed. McGraw Hill. New York.
6. Harris, J.R. and Liebert, R.M. (1987). The child. Prentice Hall, Inc.
7. Parke, R.D. (Ed). (1984). Review of child development research. Volume 7: The family. University of Chicago Press, Chicago.
8. Garbarino, J. (1982). Children and families in the Social Environment. Aldine, New York.
9. Bronfenbrenner, V. (1979). The ecology of human development. Cambridge, Harvard Univ. Press.
10. Hall, Calvin S and Lindzey. G. (1978). Theories of personality. John Wiley and Sons.
11. Munsinger, H. (1971). Fundamentals of child development. Holt, Reinhart and Winston, Inc.
12. Moorjani J; Narang D&Manika (2009).Bal Vikas Ka Manovigyan, ShriKavitaPrakashan, Jaipur
13. Bhatt, N. (2007). Human Development- A Lifespan Perspective. Aavishkar Publishers. Jaipur
14. Kuppaswami. 1974. Child Behvaour and Development. New Delhi. Vikas Publishing House.

Objectives

- To learn about elements and principles of art and their application in interior designing.
- To gain better understanding of interior enrichment.

Theory

S. No.	Topic	No. of classes
1.	Introduction and objectives of interior decoration. Elements of art and their importance in interior decoration. Principles of design and their application to enrich the interiors.	2
2.	Colour: <ul style="list-style-type: none"> • Sources of colour • Properties of colour • Emotional effect of colour • Colour schemes • Colour theories, Colour plans for interiors 	1 1 1 1 1
3.	Furniture: <ul style="list-style-type: none"> • Types of furniture, materials and finishes of furniture • Factors affecting the selection of furniture • Care and maintenance of furniture • Furniture arrangement • Paints to be considered while selecting the furniture 	2 1 1 1 1
4.	Wall: <ul style="list-style-type: none"> • Classification, types of building walls, functional characteristics of walls • Types of wall treatments • Exterior and interior wall finishes 	2 1 1
5.	Floor <ul style="list-style-type: none"> • Types of floor covering, care and maintenance • Selection of floor covering 	1 1
6.	Windows: <ul style="list-style-type: none"> • Importance, its functional • Decorative treatments 	1 1
7.	Accessories: <ul style="list-style-type: none"> • Classification, application of principles of design • Decoration in the selection/development of accessories and their placement. 	2 1
8.	Lighting: <ul style="list-style-type: none"> • Importance • Types of lighting and its application. 	1 1

S. No.	Topic	No. of classes
9.	Flower arrangement: <ul style="list-style-type: none"> • Materials used, principles involved • Types of flower management • Practical utility and care 	1 1 1
10.	Table setting: <ul style="list-style-type: none"> • Linens, tableware etc. required for table setting, table etiquettes. 	2
	Total	32

Practical

S. No.	Topic	No. of classes
1.	Learning elements of art and principles of design.	1
2.	Development of motif and design through art principles.	1
3.	Colour – colour schemes, values and intensity scale, colour wheel.	2
4.	Furniture – care and arrangement of furniture.	2
5.	Accessories – preparation and placements of accessories.	2
6.	Flower arrangement.	2
7.	Learning different types of table setting and napkin folding.	2
8.	Window treatment.	2
9.	Lighting, fixtures and their utility.	1
10	Market survey – different types of wall and floor coverings.	3
	Total	16

Suggested Readings

1. Dorothi, *et al.*, (1980).Introduction to Interior Design. New York: Mc Millan.
2. Faulkner and Faulkner.(1975). Inside Today's Home. New York: Holt, Rinehart and Winston.
3. Gewther, M. (1970).The Home, its Furnishings and Equipment U.S.A. Mc. Graw Hill.
4. Mike, L. (1986). The Complete Interior Decoration. United Kingdom: Mc Donald.
5. Ruth, M. (1975). The Home and its Furnishings, U.S.A.: Mc. Graw Hill.
6. Seetharaman P. and Sethi M. (2002).Interior Design and Decoration.CBS Publishers and Distributors. New Delhi.

Objectives

1. To understand the concept, philosophy, principles and objectives of Extension Education and its contribution towards rural development.
2. To develop understanding about selected rural development programmes of government and ICAR.

Theory

S. No.	Topic	No. of classes
1.	Extension Education <ul style="list-style-type: none"> • Concept & importance • Philosophy, principles & objectives • Evolution of Extension Education • Glimpses of Extension programmes during pre & post Independence era 	1 2 1 2
2.	Community – concept & types, Community and science	1 1
3.	Community mobilization – concept & importance	1
4.	Leader & leadership – concept, types, identification of leaders	3
5.	Rural development – concept, importance and aim	2
6.	Community development programme – concept, objectives, activities, achievements & failures	3
7.	Panchayati Raj – concept, structure & functions	3
8.	Five year plans – <ul style="list-style-type: none"> • Emergence of five year plans • Objectives of various five year plans 	1 2
9.	Current rural development programmes/organisations <ul style="list-style-type: none"> • SGSY (NRLM), • MGNREGA, • IAY, • ICDS, • DRDA • ATMA 	1 1 1 1 1 1
10.	Role of ICAR, SAUs & KVKs in rural development	2
11.	Role of NGOs in rural development.	1
	Total	32

Suggested readings

1. Ray, G.L. 2003. Extension Communication and Management. Kalyani Publishers. Fifth revised and enlarged edition.
2. Dahama, O.P. and Bhatnagar, O.P. 2003. Education and Communication for Development. Oxford and IBH Publishing Co. Pvt. Ltd.
3. Reddy, A. 1993. Extension Education, Sri Laxmi Press, Bapatla, Guntur, A.P.
4. Reddy, V.K 1988. Rural Development in India. Himalaya Publishing House, New Delhi.
5. Supe, S.V. 1986. An introduction to Extension Education, Oxford and IBH Publishing Company, New Delhi.

TAD 111

Textile Science and Fabric Care

3(2+1)

Objectives

1. To impart knowledge of processing, properties and use of different types of fiber.
2. To acquaint them with the process and materials used in the maintenance and laundering of fabric.
3. To develop abilities of stain removal, washing and finishing of different fabrics.

S. No.	Topic	No. of Classes
1	Textile: definition, forms of textile, importance of textile industry in national economy	1
2	Classification of textile fibres Properties of textile fibres; primary and secondary properties	2
3	Molecular structure of textile fibres: Monomers, polymers and their types, polymerization and its types, degree of polymerization and orientation	1
4	Cotton: Fibre production, fibre varieties and their grading ,fibre morphology, physical, chemical and biological properties and end-uses	2
5	Bastfibres: Flax, jute, hemp and ramie; Fibre production, fibre morphology, physical, chemical and biological properties and end-uses Other bast fibres (ramie, jute, hemp): Fibre production, fibre morphology and physical, chemical and biological properties and end-uses	3
6	Wool: Fibre production, classification of wool and their labeling, fibre morphology, physical, chemical and biological properties and end-uses	2
7	Silk: Fibre production and classification, fibre morphology, physical, chemical and biological properties and end-uses	2
8	Chemical spinning: Wet, melt and dry spinning and common properties of man-made fibres	1
9	Rayons: Viscose, cupramonium and High Wet Modulus rayons; fibre manufacturing, microscopic structure, physical, chemical and biological properties and end-uses	2
10	Modified cellulosic fibres: Diacetate and triacetate; fibre manufacturing, fibre microscopic structure, physical, chemical and biological properties and end-uses	2
11	Synthetic fibres: Nylon, polyester and acrylic; fibre manufacturing, fibre microscopic structure, physical, chemical and biological properties and end-uses	2

S. No.	Topic	No. of Classes
12	Mechanical spinning: Ring spinning method	1
13	Classification of yarn on the basis of structure- simple and novelty yarns, twist direction, twist amount, fibre length and end-uses	2
14	Methods of fabric construction: Weaving, knitting, braiding, tufting, net, lace making, crocheting, macramé, stitch through fabrics, quilted fabrics, laminated fabrics, bonded fabrics, felt, nonwoven and films	3
15	Stain removal: Classification of stains and methods of removing different stains	1
16	Laundry: Definition, principles, equipments, laundry methods and dry cleaning	1
17	Laundry agents: Water, soap, laundry auxiliary, stiffening agents, bleaches and blues	2
18	Care of textiles: Labeling and labeling Act Labels and tags used in textiles	1
19	Storage of clothes: Requirements of short term and long term storage, folding and packaging of clothes	1
Total		32

Practical

S.No.	Topic	No. of Classes
1	Testing of textile fibres Microscopic view	2
2	Burning test	1
3	Solubility test	2
4	Visual test	1
5	Study and identification of different types of yarns in the market	1
6	Study and identification of fabric samples of different construction in the market	2
7	Thread count	2
8	Removal of different stains from fabric surface	2
9	Washing and finishing of garments made of following fibres: Cotton, Wool, Silk, Blends/ synthetic	2
10	Visit to textile industry	1
Total		16

Suggested Readings

- Cowan, M. L. and Jungerman, M. E. 1969. Introduction to textiles. 6th ed. New York. Appleton-Century – Crofts.325 p.
- Dantiyagi, S. 1959. Fundamentals of textiles and their Care. New Delhi. Orient Longman Limited.
- Deulkar, D. and Tarabai.1967. Household textiles and laundry Work. 3rd ed. Delhi.Atma Ram and Sons Ltd.
- Hall, A.J. 1969. A Students Textbook of Textile Science. London. Allman and Son Ltd
- Hollen, N. and Saddler, J. 1968. Textiles. New York. Macmillan Company.
- Joseph, M. L. 1986. Introductory textile science. 5th ed. New York. CBS College

- Labarthe, J. 1969. Textiles: Origins to Usage. New York. McMillan Company Ltd
- Potter, M.D. and Corbman, B.P. 1967. Textiles: Fibre to fabric. New York. Macmillan Hill Co. Publishing.
- Stout, E.E. 1970. Introduction to textiles. 3rd ed. New York. John Wiley and Sons, Inc.
- Tortora, P.G. 1978. Understanding textiles. New York. Macmillan Publishing Company.
- Vatsala, R. 2003. Textbook of Textiles and Clothing. New Delhi. Indian Council of Agriculture Research
- Vilensky, L. D. and Gohl, E. P.G. Textile Science. Delhi. CBS Publishers and Distributors.
- Wingate, I. B. 1970. Textile Fabrics and their selection. 6th ed. New Jersey. Prentice Hall Inc.
- Wynne, A. 1997. Textiles. London, Macmillan Education Ltd. 310 p.

ENG-112

General English-I

2(1+1)

Objectives

- To enhance syntactic understanding among students.
- To develop language proficiency among the students.

Theory

Sr.No	Topic	No. of classes
1.	Determiners, Prepositions	1
2.	Concord, Tenses, Conditional Sentences	2
3.	Modal Verbs, Direct/indirect narration	2
4.	Precise writing, Easy writing, Letter writing, CV writing	4
5.	One word substitution, Word formation, Idiomatic Expressions	2
6.	Study of Prose and short stories from BRIGHTER ENGLISH (book of short stories), Plays, Poems and Essays by C.E. Eckersley, Orient Longman, New Delhi, 1984) The Bachelor of Arts by R.K. Narayan	5
	Total	16

Practicals

1.	Based on Lectures Language work: the prescribed lessons having a bearing on the topics covered in lectures.	5
2.	Identification of phonetic sounds and symbols Stress and Intonation	6
3.	Listening Comprehension Conversation Practice	5
	Total	16

Suggested Readings

- Allen, W. Standard. 1962 Living English Structure, Orient Longmans, London.
- Jones, Daniel. 1993. Everyman's English Pronouncing Dictionary, University Book Stall, New Delhi.
- Jones, Daniel. 1970. An Outline of English Phonetics, Arnold, London.
- George, H.V. 1970. Common Errors in English Learning, M/s Newbury House, London.
- Sharma, S.D. 1984. A textbook of Spoken and Written English, Vikas, Delhi.

Theory

S.No.	Topic	No. of lectures
1.	Multidisciplinary nature of environmental studies Definition, scope and importance.	1
2.	Natural resources Renewable and non renewable resources and their associated problems. Forest resources Use and over exploitation, deforestation, timber extraction, mining, dams and their effects on forest and tribal people.	2
3.	Water resources Use and over utilization of surface and ground water, floods, drought, conflicts over water, dams benefits and problems.	1
4.	Mineral resources Use and exploitation, environmental effects of extracting and using mineral resources.	1
5.	Food resources World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer pesticide problems, water logging, salinity.	2
6.	Energy resources Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Land resources Land as a resource, land degradation, man induced landslides, soil erosion and desertification.	2
7.	Role of an individual in conservation of natural resources, equitable use of resources for sustainable lifestyles.	2
8.	Ecosystems Concept, structure and function of an ecosystem. Producers, consumers and decomposers, energy flow in the ecosystem, ecological succession. Food chains, food webs and ecological pyramids. Introduction, types, characteristic features, structure and function of forest, grassland, desert and aquatic ecosystems.	3
9.	Biodiversity and its conservation. Introduction, definition, genetic, species, ecosystem diversity and biogeographical classification of India. Value of biodiversity Consumptive use, productive use, social, ethical, aesthetic and option values. Value of biodiversity diversity nation. Hotspots of biodiversity. Threats to biodiversity Habitat loss, poaching of wildlife, man wildlife conflicts, endangered and endemic species of India. In situ and Ex situ conservation of biodiversity.	4
10.	Environmental pollution Definition, cause, effects and control measures of air, water, soil, marine, noise and thermal pollution and nuclear hazards. Solid waste management Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution.	2
11.	Social issues and the environment. Unsustainable to sustainable development, urban problems related to energy. Water conservation, rain water harvesting, watershed management. Environmental ethics.	1
12.	Issues and possible solutions, climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust.	1

S.No.	Topic	No. of lectures
13.	Environment protection acts. Air (Prevention and control of pollution) act, water (Prevention and control of pollution) act, wildlife protection act, forest conservation act, Issues involved in enforcement of environmental legislation, public awareness.	2
14.	Human population and the environment. Population growth, variation among nations, population explosion. Role of Information Technology in environment and human health.	1
15.	Natural disasters Meaning and nature, types (floods, drought, cyclone, earthquakes, landslides, avalanches, volcanic eruptions, heat and cold waves, global warming, sea level rise, ozone depletion) and effects.	2
16.	Man made disasters Nuclear, chemical, and biological disasters, building fire, coal fire, forest fire, oil fire, road accidents, rail accidents, air accidents, sea accidents. Disaster management	2
17.	International strategy for disaster reduction at national and global levels; National disaster management framework	1
18.	Financial arrangements, role of NGOs, community-based organizations and media, central, state, district and local administration, armed forces in disaster response, police and other organizations. Feeding the people struck by the disaster, managing house and dress need during disaster.	2
	Total	32

Practical

S.No.	Topic	No. of lectures
1.	Visit to a local area to document environmental assets river/forest/grassland/hill/mountain,	4
2.	visit to a local polluted site Urban/rural/industrial/agricultural.	4
3.	Study of common plants, insects, birds and study of simple ecosystems i.e. pond, river, hill slopes, etc.	4
4.	Case studies.	4
	Total	16

Suggested Readings

- Bharucha, E. (2005). Text book of environmental studies. University Grants Commission, University Press, New Delhi.
- Kapur, A. (2005). Disasters in India: Studies of grim reality. Rawat publication, Jaipur.
- Chauhan, B.C. (2008). Environmental studies. University Science Press, New Delhi.
- De, A.K. (2010). Environmental chemistry. Willey Eastern ltd. New Delhi.
- Singh, S. and Singh, J. (2013). Disaster Management. Pravilika Publication Allahabad.

II-SEMESTER

FSN-121

Elementary Human Physiology

3(2+1)

Theory

S.No.	Topics	No .of lectures
1	Introduction to anatomy and physiology and structural organization of body	2
2	The cell –structure, its organelles, functions and multiplications, different types of cells and their functions, movement of particles across cell membrane -active transport and passive transport, body fluids and its compartments and functions	2
3	Water output and input into the body and maintenance of water balance in human body	2
4	The tissues –types, structure and their functions, the skeletal system - anatomy and functions, structure, formation and development of bones, different types of bones and types of joints and their movements	3
5	Skeletal system -anatomy and functions, structure, formation and development of bones, different types of bones and types of joints and their movements, muscular system	2
6	Circulatory system -the blood -composition and function, blood clotting and blood grouping, heart –structure, functions, types of circulatory systems, blood pressure and heart rate and factors affecting it, electrocardiogram	3
7	The respiratory system -anatomy, functions, mechanism of breathing and respiratory volumes, gas transport and respiratory adaptation	2
8	The digestive system -anatomy and functions of alimentary tract and accessory organs, process of digestion of food, absorption and assimilation of digested food, enzymes involved in digestion of food .Functions of liver. Pancreas –structure and functions	3
9	The urinary system -anatomy and functions, formation and composition of urine	2
10	The endocrine system -important ductless glands of the body and their functions, locations and secretions	3
11	The reproductive system -male reproductive system –anatomy and functions, female reproductive system –anatomy and functions, menstrual cycle, Reproductive cycle-menstruation and estrous cycles, fertility test	3
12	The nervous system -elementary study of (anatomy and functions) Functions of brain and spinal cord .nerve impulse reflex action	3
13	Sensory organs– (anatomy and functions) Glossary of terms used in physiology	2
	Total	32

Practical

S.No.	Experiments	No.of practical
1.	Demonstration of animal viscera. Identification of systems and organs Identification of cells – epithelial Muscle, skeletal system Nerve etc Transverse section of stomach Intestine – small and large demonstration of specimens of spleen Kidney and brain models of excretory and reproductive	2
2.	Estimation of RBC and WBC count by heamocytometer, Estimation of hemoglobin in mammalian blood, estimation of bleeding and clotting time and blood groups	3
3.	Demonstration of differential counting of WBC using peripheral smear, T.L.C. and D.L.C. PCV ESR, micro and macro heamatocrit	3
4.	Measurement of pulse rate and blood pressure Its variation with exercise, Heart beat and Heart sound	2
5.	Testing for sensation Special sensors Measurement of body temperature	3
6.	Demonstration/Estimation Respiratory quaoient Inspiration Expiration and measurement of O ₂ and CO ₂ at various partial pressure in lungs.	3
	Total	16

Suggested Readings

- Arthur J. Vanders. Human Physiology- The mechanisms of body function, Tata McGraw Hill Publishing Company, New Delhi.
- Samson Wright. Applied Physiology. 10th edn. Revised by Keele, C.A. and Neil, B. Oxford University Press, New York.
- C. Guyton. Text Book of Medical Physiology. 5th ed. W.B. Saunders Company- Philadelphia, London.

FSN-122

Principles of Biochemistry

3(2+1)

Theory

S.No.	Topics	No .of lectures
1	Recapitulation of basic chemistry and biology	2
2	Water pH and buffers	2
3	Acid-base balance	2
4	Cellular constituents Structure and function : Amino acid and proteins Carbohydrates Lipids and bio membranes Nucleic acids Dissolved molecules – Vitamins and minerals	3

S.No.	Topics	No .of lectures
5	Enzymes function, properties, mechanism	3
6	Metabolism of cellular constituents Basic concepts of Bioenergetics	3
7	Carbohydrates metabolism Glycolysis and glycogenolysim HMP pathway TCA Cycle Electron transport chain Photosynthesis Gluconeogenesis	1 2 1 1 1 1 1
8	Lipids metabolism Beta-oxidation Ketone bodies	3
9	Fatty acid synthesis Amino acid metabolism General reactions of nitrogen assimilation and excretion.	3
10	Biosynthesis of DNA, RNA and Protein Replication Transcription Translation and genetic code Regulation of gene expression.	4
	Total	32

Practical

S.No.	Experiments	No .of Practical
1	Preparation of buffers and pH determination; Preparation of colloids	2
2	Qualitative and quantitative tests of carbohydrates, lipids, Amino acids and proteins.	2 2 2
3	Tests of enzyme action;	2
4	Experiments on potato oxidase urease, salivary amylase	2
5	Paper chromatography of amino acids or carbohydrates ascending and descending	2
6	Determination of starch , sugar;	2
	Total	16

Suggested Readings

- Conn, EE and Stumpf, PK. 1987. Outlines of Biochemistry. John Wiley.
- Nelson, DL and Cox, MM. 2004. Lehninger Principles of Biochemistry. 4th Edn. MacMillan.
- Voet D, Voet JG and Pratt, CW. 2007. Fundamentals of Biochemistry. John Wiley
- Jayaram. T. 1981. Laboratory manual in biochemistry, New Delhi: Wiley Estern Ltd.
- Plummer D. 1988. An Introduction to Practical Biochemistry. 3rd ed. Tata McGraw Hill, New Delhi.
- Hames B.D., Hooper N.M. and Houghton J.D. 1997. Instant Notes in Biochemistry. BIOS Scientific Publishers.

Objectives

1. To develop in the students insight regarding human development in a life span perspective.
2. To promote the learning of basic concepts of Human Development and their implication in understanding life- span development.
3. To orient the students regarding the salient factors influencing Human Development.
4. To equip the students with skills to study developmental aspect in a life span context.

Theory

Sr.No	Course Title	Credit hours
1.	Life span development, stages of development-Prenatal, Infancy and Early Childhood, middle childhood and adolescence, Adulthood and old age	3
2.	Prenatal, perinatal and postnatal stages- <ol style="list-style-type: none"> a. Issues and scientific concepts associated with conception b. Pregnancy c. Prenatal development d. Labor/ birth e. Postnatal 	2 2 2 2 2
3.	Infancy and Early childhood- <ol style="list-style-type: none"> a. Physical, Motor, social, emotional, cognitive and language characteristics b. Antecedent influences on early growth and development c. Stimulating approaches for optimizing development 	4 1 1
4.	Middle childhood and Adolescence <ol style="list-style-type: none"> a. Physical, Motor, social, emotional, cognitive and language characteristics b. Antecedent influences on growth and development 	4 1
5.	Adulthood and Old age- <ol style="list-style-type: none"> a. Physical, motor, social, emotional, cognitive and language characteristics b. Antecedent influences for growth and development during adulthood c. Stimulating approaches for optimizing development 	4 1 1
6.	Recent issues in growth and development from infancy to old age	2
	Total	32

Practical

Sr.No	Course Title	Credit hours
1.	Observational visits to well baby clinic to observe full term and preterm babies	2
2.	Case study of individuals in different stages of development(Any three)- Infancy/Early Childhood, School age/adolescence, Adulthood / old age	3+3+3
3.	Critical analysis of case study and report presentation	2
4.	Preparation of resource file related to any one stage of life span	3
	Total	16

Suggested Readings

- Laura, B.E. (2013). Exploring life span development. 3rded. McGraw Hill, New York.
- Santrock, J. (2012). Life span development. 14thed. McGraw Hill, New York.
- Papalia, D.E. and Olds, S. W. (2008). Human development. 11thed. McGraw Hill, New York.
- Grinder, R.E. (1993). Adolescence. John Wiley and Sons, New York.
- Schaimberg, L.B. (1988). Child and adolescent development. Macmillan publishing company, New York.
- Papalia, D.E. and Olds, S.W. (1978). Human Development. McGraw-Hill, New York.
- Bhatt, N. (2007). Human Development- A Lifespan Perspective. Aavishkar Publishers. Jaipur
- Purohit S., Tandon S.P. and Kordia K. (1996). MaanavVikaas k Sopan. Ajmera book company Jaipur.

RMCS -121

System Dynamics and Management of Resources

2(1+1)

Objectives

- To give insight about management principle and ability to apply the knowledge for problem solving.
- To become good managers and understand the importance of managing resources to achieve goals.

Theory

S. No.	Topic	No. of classes
1.	Systems approach to management.	2
2.	Motivating factors of management- values, goals and standards, origin, classification and role	2
3.	Resources – definition, types, guidelines for use of resources and factors affecting, management of household resources and situation	3
4.	Management process-planning-importance, types, characteristics and techniques, organizing; controlling- definition, phases and factors, evaluating- definition and types of evaluating.	3
5.	Time - tools of time management, and process of time management.	2
6.	Decision making process - types, steps in decision making and factors affecting decision making.	2
7.	Money - management process, types and sources of income	2
	Total	16

Practical

S. No.	Topic	No. of classes
1.	Identification of individual and family values, identification of immediate, short term and long term goals of individual and family.	4
2.	Standards for individual and family goals.	3
3.	Decision making by individuals and families. Applying decision making process, group work presentation on types of decision and decision making process.	2
4.	Listing out human and non – human resources, listing community resources.	2
5.	Application of management process to organize an event– planning, organization, evaluation.	2
6.	Management of personal time record for a week. Presentation of personal time record.	3
	Total	16

Suggested Readings

1. Mann, M.K. (2004). Home Management for Indian Families, Kalyani Publisher Ludhiana
2. Nickell, P. and Dorsey, J.M. (1970). Management of Family Living. Wiley Eastern, New Delhi
3. Vargeese, M.N. Ogale, N.N. and Srinivasan, K. (1992). Home Management, Wiley Eastern, New Delhi.
4. Krishna Oberoi (2006). Resource Management for Better Homes. R.K. Offset, Delhi.
5. Bhargava, Bela. (2005). Family Resource Management and Interior Decoration. Apple Printer and V. R. Printers, Jaipur.

EECM 121

Women in Agriculture

2(2+0)

Objectives

1. To develop an understanding about agriculture scenario in India
2. To develop an understanding of the status of rural women.
3. To develop an understanding about women empowerment.

Theory

S. No.	Topic	No. of classes
1.	Present scenario of agriculture in India- Land use pattern, major crops and yield	2 3
	Role of agriculture and allied sectors (animal husbandry, fisheries, sericulture, forestry) in Indian economy	3
2.	Role of women in agriculture & allied activities	3
3.	Status of rural women- <ul style="list-style-type: none">• Social• Economic• Health	3
4.	Women friendly tools & implements	4
5.	Gender issues	3
6.	Occupational health hazards of women in agriculture	3
7.	Policy for Women in Agriculture	2
8.	Women empowerment – <ul style="list-style-type: none">• Concept & Need• Ways of empowerment	1 2
9.	Agri-preneurship <ul style="list-style-type: none">• Concept• Process	1 2
	Total	32

Suggested readings

1. Bhaduria, M. 1997. Women in India: Some Issues. APH Publishing Corporation, New Delhi. 110002
2. Grover, I. and Grover, D. 2002. Empowerment of Women. Agrotech Publishing Academy, Udaipur.
3. Punia, R.K. 1992. Women in Agriculture. Northern Book Centre, New Delhi.
4. Upadhyay, H.C. 1991. Status of Women in India, Anmol Publications. New Delhi.

TAD 121

Fundamentals of Clothing Construction

3(1+2)

Objectives

1. To understand basic sewing concepts and sewing equipments
2. To develop skill in basic sewing techniques.
3. To develop skill in mending and patching of garments.
4. To acquaint them with the principles of art.

Theory

S.No.	Topic	No. of Classes
1	Terminology related to clothing construction	1
2	Sewing tools and equipments required for measuring, drafting, cutting and stitching	2
3	Selection and preparation of fabric for garment construction	1
4	Layout of paper pattern, marking, cutting and stay stitching	1
5	Unit construction method Importance and function of clothes	1
6	Socio- economic and psychological factors affecting clothing choices	1
7	Consumer behaviour and motivation	1
8	Clothing requirements of different age groups: <ul style="list-style-type: none">• Infant & Toddler,• Pre-schooler,• School age children,• Teenager,• adolescent,• Adult and Senior citizen	1 1 1 1 1 1
9	Application of elements and principles of art in apparel designing	2
Total		16

Practical

S.No.	Topic	No. of Classes
1	Demonstration on: <ul style="list-style-type: none">• Sewing equipments and tools,• Sewing machine and its care.	1 1
2	Preparation of samples: <ul style="list-style-type: none">• Hand stitches; basting, slip-stitching, hemming, smocking, over casting, attaching fastener and button holing, mending and patching• Machine stitches; seam and seam finishes, pleats, gathers and tucks, stay stitch, under stitching, placket opening	8 8
3	Demonstration on taking body measurements	2
4	Preparation of fabric for cutting, and layout of paper pattern on different fabrics patterns including plain, print, lines, plaid and check.	3
5	Drafting, cutting and stitching of different garments: <ul style="list-style-type: none">i. Baby frockii. Pantyiii. Bloomeriv. Blouse	2 2 2 3
Total		32

Suggested Readings

- Carson, B. 1969. How You Look and Dress. 4th ed. New York. Webster Division, McGraw-Hill Book Company.
- Doongaji, S. and Deshpande, R. Basic Processes and Clothing Construction. 2nd ed. New Delhi. New Raj Book Depot.
- Erwin, M.D. *et.al.* 1979. Clothing for Moderns. 6th ed. New York. Macmillan Publishing Co.
- Gawna, E.J. and Querke, B.V. 1969. Dress 3rd ed. Illinois. Peoria Chas Bennett Co. Inc.
- Kefgen, M. and Phyllis, T.S. 1971. Individuality in Clothing Selection and Personal Appearance. New York. The Macmillan Company.
- Lewis, V.S. 1979. Comparative Clothing Construction Techniques. Minnesota. Burgess Publishing Company.
- Mansfield, E.A. and Lucas, E.L. 1974. Clothing Construction. 2nd ed. London. Houghton Mifflin Company.
- Sodhia, M. 2004. Advanced drafting and draping. New Delhi. Kalyani Publisher.
- Rosencranz, M.I. 1972. Clothing Concepts- A Social and Psychological Approach. New York. The Macmillan Company Ltd.
- Tate, M.T. and Glisson, O. 1961. Family Clothing. New York. John Wiley and Sons.
- Sannapamma, K.J. and Jahan, S. TXAD111-Fundamentals of Clothing Construction. ecourse.iasri.res.in.

Objectives

- To develop understanding regarding different forms of technical writing.
- To develop competence in technical writing.

Theory

S. No.	Topic	No. of classes
1.	Technical writing- concept, importance and difference between technical and general writing	1
2.	Different forms of technical writing- Technical articles, Reports, Proposals, Technical correspondence	1
3.	Writing process - prewriting, drafting, rewriting and editing	1
4.	Preparation of manuscript- Introduction, Headings, writing a paragraph (Inductive, deductive, question to answer, exposition, time order, comparison and contrast, enumeration, space order), Conclusion, decimal system of numbering, abbreviation, Type size and style	2
5.	Technical articles- Source material, topic selection, literature review, tables, figures, footnotes, bibliography.	2
6.	Reports- Definition and characteristics, different types of report formats (Blank form, letter form, memorandum form and general survey report)	3
7.	Proposal writing- Definition and kinds of proposal, division of formal proposal (Front matter, letter of transmittal, title page, summary or abstract, table of contents, statement of request and body).	3
•	Technical correspondence- General principles of technical correspondence, parts of a letter (Heading, address, salutation, body, complimentary closing, signature), type of letters (letters giving instructions, inquiries and answers to inquiries, complaints and adjustments, letter urging action, applications and resumes).	3
Total		16

Practical

S. No.	Topic	No. of classes
1.	Writing a paragraph	3
2.	Writing manuscript and final draft of the following- <ul style="list-style-type: none"> • Technical report • Formal correspondence • Proposal • Technical articles 	3 3 4 3
Total		16

Suggested Readings

- Strunk, Jr.; William and White, E.B. (1967). The elements of style. New York: Macmillan.
- Sherman, T.A. and Simon, S. J. (1990). Modern technical writing. New Jersey: Prentice-Hall.
- Alvarez, J.A. (1980). The elements of technical writing. New York: Harcourt.
- Krishnamohan and Banerjee, M. (1990). Developing Communication Skills. MacMillan India Ltd, New Delhi.

Theory

S.No.	Topics	No. of lectures
1.	Introduction to computers, anatomy of computers, memory concepts, units of memory, operating system, definition and types.	4
2.	Application of MS-Office for creating, editing and formatting a document, data presentation, tabulation and graph creation, statistical analysis, mathematical expressions.	4
3.	Database- Concepts and types, creating database, uses of DBMS in health and nutrition.	4
4.	Internet and World Wide Web (WWW)- Concepts, components and creation of web, HTML, XML coding.	4
	Total	16

Practical

S.No.	Topics	No. of practical
1.	Study of computer components, accessories, practice of important DOS commands. Introduction of different operating systems such as windows, Unix, Linux, creating files and folders, file management.	5
2.	Use of MS-WORD and MS Powerpoint for creating, editing and presenting a scientific document, handling of tabular data, animation, video tools, art tool, graphics, template and designs.	6
3.	MS-EXCEL - Creating a spreadsheet, use of statistical tools, writing expressions, creating graphs, analysis of scientific data, handling macros.	6
4.	MS-ACCESS: Creating database, preparing queries and reports.	4
5.	Introduction to World Wide Web (WWW) and its components, creation of scientific website, presentation and management of health information through web.	4
6.	Use of smart phones and other devices for health warning signs and dietary management.	4
7.	Hands on practice on preparation of decision support system.	3
	Total	32

Second Year B.Sc. (Community Science)

III-SEMESTER

FSN 211

Principles of Human Nutrition

3(2+1)

Theory

S . No.	Topic	No .of Lectures
1	Food groups, food guide pyramid and its importance, foods as a source of nutrients	1
2	Relationship of nutrition to health, growth and human welfare; Definitions of terms used in nutrition-Recommended dietary allowances; balanced diet; health; functional food; phytochemicals; nutraceuticals; dietary supplements	1 2
3	Energy- Units, sources and requirements, fuel value of foods, methods of measuring energy value of food, energy requirement of body, physical activity and thermogenic effect of food, BMR- methods of measurement, factors affecting BMR	2 1 2 1
4	Digestion and absorption of carbohydrates, fats and proteins	1
5	Carbohydrates- Types, functions, sources, requirement, health conditions affected by carbohydrates, Significance of dietary fibre	2 1
6	Lipids- Types, functions, sources, requirement, health problems associated with lipids	1 1
7	Proteins- types, functions, sources, requirement, quality evaluation, improvement, deficiency disorders and protein energy malnutrition	2 1 2
8	Vitamins -Classification, functions, sources, requirement, deficiency and toxicity of the following - i (Fat soluble vitamins-A, D, E, K; ii (Water soluble vitamins –C,) B Complex:thiamine, riboflavin, niacin, B2, B3 and folic acid	1 2 1 1
9	Minerals- Classification, functions, sources, requirements, deficiency and toxicity of calcium, phosphorus, iodine, fluorine, iron, bioavailability and factors affecting calcium and iron absorption sodium, potassium, chloride, copper and zinc;	1 1 1 1
10	Water, Functions, sources, distribution in body water and electrolyte balance	1 1
	Total	32

Practicals

S.No.	Experiment	No .of practicals
1	Serving size of common dishes	2
2	Planning and preparation of nutrient rich dishes :protein, calcium, iron, vitamin A, thiamine, riboflavin, niacin and ascorbic acid) bcalculate calorie and cost of dishes prepared for above nutrients	6
3	Evaluation of three days energy balance	2
4	Planning and preparation of dishes based on simple processing techniques to improve bioavailability of nutrients.	
	Germination	1
	Fermentation	1
	Mutual supplementation	1
	Malting and others	1
5	Planning and preparation of low cost nutritious recipes	1
6	Study of common deficiency diseases through audio visual aids	1
	Total	16

Suggested Readings

- Agarwal, A and Udipi, S. (2014). Text Book of Human Nutrition. Jaypee Medical Publication, Delhi.
- Sehgal, S. and Raghuvanshi, R.S. (2007). Text Book of Community Nutrition. ICAR Publication.
- Khanna, K. Gupta, S. and Seth, R. 1999. Text Book of Nutrition and Dietetics. Phoenix Publishing house Pvt. Ltd., New Delhi.
- Gopalan, C. Ramasastri, B. V. and Balasubramanian, S.C., 1998. Revised and updated by Rao, B.S.N., Deosthale, Y.G. and Pant, K.C. Nutritive value of Indian Foods. NIN, Hyderabad, India.
- NIN. 2010. A. Manual, Dietary Guidelines for Indian and National Institute of Nutrition, Hyderabad.
- Krause, M. V. and Mahan, L. K. 2004. Food; Nutrition &Diet Therapy. WB. Sunders Co. Philadephia.
- Robinson, C.H. and Lawler, M.R. 1986. Normal and Therapeutic Nutrition. Mc- Millan Co., New York.
- Swaminathan, M.S. 1985. Advanced Text Book on Food and Nutrition. Vol. I and II. The " Bangalore Printing and Publishing Co, Ltd. Bangalore.

Theory

S. No.	Topics	No. of practicals
1	Food situation in India and in the world,	2
2	Role of nutrition in agricultural planning and national development. Food production and consumption trends, food balance sheets. Linkages between agricultural practices, Food crop failure and malnutrition,	2 2 2 1
3	Farming and cropping system, Effect of food production, physical resources, inputs and manipulation, and economic policies on food availability, Poverty and vicious cycle of low food production,	2 3 1
4	Agricultural marketing system, Employment and cash income, markets and food prices Food distribution systems	2 2
5	Post harvest processing of foods on food and nutrition situation	2
6	Food and nutrition security at national and household level Concepts and definitions agriculture and food security; nutrition and health; urbanisation and food security; food systems and food security, macroeconomic policies.	3
7	Effect of urban agriculture on the nutritional status of vulnerable groups ; Innovative approaches to enhance local food production and improve food distribution systems; Innovative and effective Approaches to manage health risks of urban agriculture	3
8	Nutrition policy implementation; nutritional impact of agricultural programmes, Food price control and consumer subsidy;	3 2
	Total	32

Suggested Readings

- Bhatia MS. (1991). Agricultural Statistics at a Glance. Ministry of Agriculture, Govt. of India, New Delhi.
- Census (1981, 1991, 2001).
- India (2001). A Reference Annual. Publication Division, Ministry of Information about Broadcasting, Govt. of India.
- UNICEF (1999). The State of World's Children. Oxford University Press.

Theory

S. No.	Topics	No. of lectures
1	Basic aspects and scope of food microbiology; Intrinsic and extrinsic factors that affect microbial growth in foods	2
2	Microbial spoilage of Milk, fruits, fruit juices, vegetables, cereals, meat, poultry, sea foods, carbonated soft drinks, canned foods; chemical changes caused by microorganisms; control of spoilage	3
3	Food Fermentations, traditional fermented foods of India and other Asian countries Probiotics, prebiotics and synbiotics	3
4	Food preservation -Physical methods	2
5	Chemical preservatives and natural antimicrobial compounds, biology based preservation system	3
6	Control of microorganisms by use of low and high temperature, asepsis, water activity, drying, preservatives, radiation and pressure for control of microorganisms	3
7	Microbiology of milk and milk products; Sources of contamination, spoilage and prevention	2
8	Microbiology of fruits and vegetables	2
9	Cereal and cereal products	2
10	Meat and meat products	2
11	Fish and other sea foods	2
12	Poultry and eggs	2
13	Sugar and sugar products; salts and spices	2
14	Food poisoning caused by bacteria: Salmonella Staphylococcal poisoning Botulinum Clostridium perfringens and B.cerus. Sources incubation period mechanism of action.	2
	Total	32

Practical

S. No.	Experiments	No. of Practicals
1	General laboratory practices in microbiology laboratory	1
2	Equipment used in food microbiology laboratory	1
3	Aseptic methods	1
4	Sterilization methods	1
5	Morphological studies	1
6	Preparation of media	1
7	Isolation and enrichment of microorganisms	1
8	Microbial analysis of food products and water .	1

S. No.	Experiments	No. of Practicals
9	Isolation of molds from foods.	1
10	Microbial examination of :	
	cereal and cereal products	1
	vegetable and fruits	1
	meat and meat products	1
	fish and other sea foods	1
	Eggs and poultry	1
	milk and milk products; sugar, salts and spices.	2
	Total	16

Suggested Readings

- Stanier Ingraham and Wheels and Painter. 1992. General Microbiology. 5th ed.
- Kapoor, T. and Yadav. 1991. An Introduction to Microbiology.
- Pelczar, *et al.* 1996. Microbiology, 5th edn.

HDFS-211

Marriage and Family Dynamics

3 (2+1)

Objectives

1. To develop analytical and critical thinking towards the institution of marriage in different cultural context.
2. To develop conceptual understanding for harmonious and wholesome family living.

Theory

S. No.	Course title	Credit hours
1.	Marriage- Definition, goals/functions, types/forms of marriage in India	2
2.	Readiness for marriage– Definition, importance, areas of readiness for marriage	2
3.	Mate selection- meaning, mode/methods of mate selection, Theories of mate selection ,Guidelines for mate selection	2
4.	Engagement and it's importance	1
5.	Rituals and ceremonies of marriage in different religions of India	2
6.	Marital roles and behaviors- Definition and importance of marital roles, determinants of marital role behavior	2
7.	Concept related to gender roles, changing gender roles, factors responsible for changing gender roles	2
8.	Marital adjustment- definition a. Areas of marital adjustment b. Factors influencing marital adjustment c. Obstacles in marital adjustment d. Marital adjustment techniques e. Marital success	3

S. No.	Course title	Credit hours
9.	Family: Definition a. Functions b. Forms/types of family c. Family structure d. Pattern of changes in family structure and relationships in India e. Factors responsible for changes in family - familial and extra familial and its consequences on family life and society	3
10.	Family life cycle- Definition, importance of studying family life cycle, types of marital relation and adjustments over family life cycle	2
11.	Marital dissolution: definition a. Types-Voluntary and Involuntary b. Factors responsible for an increase in the rate of legal marital dissolution c. Consequences of divorce d. Adjustment to divorce family	2
12.	Typical and alternative forms of families- Characteristics of Single parent families, female headed families, childless families, adoptive families, dual earner families, reasons behind alternative form of family and its merits and demerits	2
13.	Alternatives to marriage- singlehood, heterosexual cohabitation/ consensual union, homosexual union, reasons behind it and its merits and demerits	2
14.	Family Disorganization: a. Family stress-Types, Factors affecting, impact and coping strategies b. Family crisis-Theory of family crisis (Hill's ABCX model and Check mark model) c. Conditions for crisis d. Stages of a crisis e. Characteristics of crisis events f. Effects of crises g. Factors which affect meeting the crises h. Adjustment to crises, general things to do in times of crises.	3
15.	Laws and acts regarding marriage, adoption, divorce and inheritance in India	1
16.	Counseling (premarital, marital and family)- objectives, importance, areas of counseling, types, process and effects	1
	Total	32

Practical (Format of old manual)

S. No.	Course title	Credit hours
1	Study on motives of marriage, selection of partner	4
2	visit to marriage bureau and family counseling center	4
3	Comparative study on nuclear and joint families, atypical families and alternative forms of families	4
4	Marital roles and adjustments, family crisis and coping; Roles across family life cycle.	4
	Total	16

Suggested Readings

- Benokraitis.V.N. (2014). Marriage and families. 8th ed. Pearson publication.
- Ahuja, R. (2005). Indian social system. Rawat publication. New Delhi.
- Kumar, R. (2000). Violence against women. Anmol publication pvt ltd., New Delhi.
- Goode, W.J. (1989). The family. New Delhi: Prentice Hall of India Private Limited.
- Adams B.N. (1980). The family: A sociological interpretation. 3rded. Rand McNally College Publishing Company, Chicago.
- Nye, I. (1973). The family: Its structure and interaction. MacMillan Publishing Company, New York.
- Kenkel, W.F. (1973). The family in perspective. Meredith Corporation, New York.
- Gordon Michael (ed). (1972). The nuclear family in crises. The search for an alternative. New York: Harper and Row Publishers.
- Hate, C.A. (1969). Changing status of woman. Allied publishers, New Delhi.
- Kapadia. K.M. (1966). Mariage and family in India. 3rded. Oxford university press, Kolkata.
- Lantz and Snyder 1999. Marriage. John Wiley and Sons. New York.
- Tiwari G. 2015 Dynamics of Marriage and Family Agrotech publishing Academy.

RMCS-211

Financial Management and Consumer Education

2(1+1)

Objectives

1. To learn the basic of financial management which have an impact on family consumption patterns.
2. To educate the students to become good consumers.

Theory

S. No.	Topic	No. of classes
1.	Concepts, importance, objectives and major aspects of family finance	1
2.	Income concepts: productive income, hidden income, money income, real income, psychic income	1
3.	Family – as income producing and utilizing unit, factors affecting in the use of family income	1
4.	Analyzing income: income profile, methods of handling income, account keeping	1
5.	Family budget: steps of budget making, factors influence on budget making, advantages of budget making, Engel's law of consumption, standard of living, controlling and evaluation of budget.	1
6.	Credit- needs types, use and source, planning for financial security of families, credit institution	1
7.	Savings and Investment- types of savings / investment, saving institution and its importance, criteria for judging family investments	1
8.	Taxation- objectives, characteristics and classification.	1

S. No.	Topic	No. of classes
9.	Consumer – definition and role, concept of consumer and consumer economics	1
10.	Market and merchandising – types of market, definition and importance of merchandising.	1
11.	Consumer problems in rural and urban areas: unfair trade practices, adulteration, faulty weights and measures.	1
12.	Consumer rights and responsibilities	1
13.	Consumerism and consumer protection- history of consumer movement in the developed and developing countries, growth of consumerism, consumer protection Act and Govt. legislation and order, NGO's for consumer protection and welfare.	1
14.	Standard, standardization and legislative measures for regulating quality.	1
15.	Sources of consumer information – advertisements, labels, packaging etc.	1
16.	Consumer and environment	1
	Total	16

Practical

S. No.	Topic	No. of classes
1.	Making personal and family budget	2
2.	Family financial record keeping	2
3.	Survey to identify consumer problems	3
4.	Adulteration detection	2
5.	To learn standardized marks, weights and measures etc.	3
6.	Critical analysis of labels and brands of consumer products	4
	Total	16

Suggested Readings

1. Khetarpaul, N and Grover, I. (2004). Consumer Guide for Home Maker – Udaipur: Agratech Pub Academy.
2. Maneesha Shukul and Veena Gandotra. (2006). Home Management and Family Finance. Dominant Publishers and Distributors, New Delhi.
3. Mann, M.K. (2004) Home Management for Indian Families. Kalyani Publishers, New Delhi.
4. Rice, Nickel and Tucker. (1976). Management in Family Finance. John Wiley and Sons., New York
5. Seetharaman P. Sethi M. (2002). Consumerism Strategies and Tactics. CBS Publishers and Distributors. New Delhi.
6. Tiwari, O.P. (2000). Consumer Protection Act Allahabad: Allahabad Law Agency.
7. Verghese, M.N. Ugale, W. N. and Srinivasan, K. (1997). Home Management, New Delhi: New Age International.

Objectives

1. To develop understanding of communication process.
2. To develop understanding about different types of information technologies, audio visual aids and extension teaching methods.
3. To develop competence in use of information technologies, audio visual aids and extension teaching methods.

Theory

S. No.	Topic	No. of classes
1.	Information Technology – concept & importance	1
2.	IT tools – concept & importance <ul style="list-style-type: none"> • Radio • TV • Teleconferencing • Internet, e-mail • Telephone • Fax 	3
3.	Communication – <ul style="list-style-type: none"> • Concept, importance & elements • Models of communication • Barriers in communication 	2
4.	Audio visual aids- meaning, importance & classification	1
5.	Cone of experience.	1
6.	Criteria for selection of audio visual aids	2
7.	Concept & principles of preparing following aids: <ul style="list-style-type: none"> • Charts & posters. • Flip book • Leaflet, folder, pamphlet 	1
8.	Three dimensional aids – specimen, objects & models	1
9.	Communication approaches – individual, group & mass	1
10.	Concept and principles of teaching & learning in Extension	2
11.	Concept, importance & use of following extension teaching methods- <ul style="list-style-type: none"> • Farm & home visit • Discussion & meetings • Field trip • Exhibition • Demonstration • Role play 	1
	Total	16

Practical

S. No.	Topic	No. of classes
1.	Use of following IT tools – <ul style="list-style-type: none">• Internet & E-mail• Fax• Teleconferencing	2 1 3
2.	Planning and designing of following aids using computer – <ul style="list-style-type: none">• Chart• Poster• Flip book• Leaflet/ folder/ pamphlet	3 3 3 3
3.	Handling of audio-visual equipments	1
4.	Organization of an audio-visual programme	2
5.	Planning & use of selected extension teaching methods- <ul style="list-style-type: none">• Farm and home visit• Demonstration• Group discussion• Role play• Exhibition	2 2 2 2 3
	Total	32

Suggested readings

1. Ray, G. L. 1996. Extension Communication and Management, Naya Pakash, Bidhan Sarani, Calcutta.
2. Reddy, A. 1993. Extension Education, Sri Laxmi Press, Bapatla, Guntur, A.P.
3. Waghmare, S.K. 1980. Teaching Extension Education, Prashant Publishers, Vallabh Vidhyanagar – 388120
4. Grover, I. Sethi, N. and Grover, D. 2004 Handbook of communication and Media Agrotech Publishing Academy, Udaipur.
5. Khan, M. and Sharma, S.R.1998.Education and communication for development. Oxford IBH,New Delhi.
6. Grover, I., Kaushik, S. and Yadav, L. 2002. Communication and Instructional Technology, Agrotech publishing Academy, Udaipur (Raj.)
7. Govind S., Tamilselvi g. & Meenambigai J. 2011.Extensiobn Education and Rural Development, AGROBIOS (India)

Objectives

1. To acquire an understanding of loom and knitting machine.
2. To develop skill in making different types of weaving and knitting
3. To acquaint with the various fabric construction methods.

Theory

S.No.	Topic	No. of Classes
1	History of weaving and looms	1
2	Woven fabrics; simple woven structures and compound woven structures and characteristics of woven fabric	1
3	Classification of looms on basis of mechanics, means of running loom, structure and means of weft insertion	2
4	Parts of loom and loom accessories and their function Mechanism of weaving: primary, secondary and tertiary motions	2
5	Basic weaves: Plain, twill and satin and their variations	2
6	Complex weaves: extra yarn fabrics, pile fabrics, leno, damask and jacquard	2
7	Knitting: Terminology and principle of knitting	2
8	knitting machine: Parts and their function and types of knitting machine	1
9	Knitting stitches: plain, rib and purl and types of knit fabrics	1
10	Macrame and crochet: Tools and materials.	1
11	Manufacturing process of felt, properties and end uses	1
Total		16

Practical

S.No.	Topic	No. of Classes
1	Observation of fabric structures under magnifying glass	1
2	Graphical representation of woven design	4
3	Handloom and its parts	1
4	Weaving calculations	2
5	Yarn preparation for plain weave	2
6	Setting of loom and weaving of plain weave fabric	2
7	Knitting machine and its parts	2
8	Sample preparation of different fabric constructions <ul style="list-style-type: none"> • Hand knitting; plain, rib, purl 	6
9	<ul style="list-style-type: none"> • Knots of macramé 	3
10	<ul style="list-style-type: none"> • Stitches of crochet 	5
11	<ul style="list-style-type: none"> • Manual felting 	4
Total		32

Suggested Readings

- Hollen, N. and Saddler, J. 1968. Textiles. New York. Macmillan Company.
- Joseph, M. L. 1986. Introductory Textile Science. 5th ed. New York. CBS College Publishing.
- Labarthe, J. 1969. Textiles: Origins to Usage. New York. McMillan Company Ltd
- Potter, M.D. and Corbman, B.P. 1967. Textiles: Fibre to fabric. New York. Macmillan Hill Co.
- Stout, E.E. 1970. Introduction to textiles. 3rd ed. New York. John Wiley and Sons, Inc.
- Tortora, P.G. 1978. Understanding textiles. New York. Macmillan Publishing Company.
- Vatsala, R. (2003), Textbook of Textiles and Clothing. New Delhi. Indian Council of Agriculture Research.
- Vilensky, L. D. and Gohl, E. P.G. Textile Science. Delhi. CBS Publishers and Distributors.
- Wynne, A. 1997. Textiles. London. Macmillan Education Ltd. 310 p.

STAT- 211

Elementary Statistics

3(2+1)

Theory

S. No.	Topic	No. of classes
1.	Introduction to statistics: definitions, functions, uses and limitations	1
2.	Classification and tabulation of data: qualitative and quantitative classification, discrete and continuous variables, frequency tables, grouped and ungrouped data	2
3.	Diagrammatic representation of data: One and Two and dimensional diagrams with applications.	2
4.	Graphical representation of data: Histogram, frequency polygon, frequency curve, ogives.	2
5.	Measures of central tendency: Introduction to basic concepts of logarithms, AM, GM, HM, median. mode with merits, demerits and uses, relationship between AM, GM and HM,	3
6.	Measures of dispersion: range coefficients, inter quartile range, quartile deviation, deciles, coefficient of quartile deviation, mean deviation from AM, median and mode, variance, standard deviation, coefficient variation.	4
7.	Moments: Raw moments, Central moments for grouped and ungrouped data, relationship between raw moments and central moments.	3
8.	Measures of skewness and kurtosis: definitions of symmetrical distribution, skewness and kurtosis, relationship between mean, median and mode and between quartiles for symmetrical and skewed distributions.	3
9.	Correlation and linear regression analysis: definition of correlation its types, scatter diagrams, Karl Pearson's formula of correlation coefficients, properties of correlation coefficient, definition of regression, regression equations of Y on X and of X on Y, relationship between correlation coefficient and regression coefficients. Problems based on correlation and regression.	4

S. No.	Topic	No. of classes
10.	Tests of significance: basic definitions, hypothesis, null and alternative hypothesis, tests statistic, testing of hypothesis, one sample and two sample t-test fisher's t-test. Chi-square test of goodness of fit and Chi-square test of independence of attributes.	4
11.	Introduction to sampling methods: definition of population, random sample, sampling versus complete enumeration, use of random number table for selecting a simple random sample, simple random sampling with and without replacements.	4
	Total	32

Practicals

S. No.	Topic	No. of classes
1.	Graphical representation of data (Histogram, frequency polygon, frequency curve, ogives)	1
2.	Measures of central tendency (AM,GM,HM, median, mode for Grouped and Ungrouped data)	2
3.	Measures of dispersion (Range, mean deviation, standard deviation, quartile deviation, coefficient of variation for Grouped and Ungrouped data) with calculation of quartiles, deciles and percentiles.	3
4.	Measures of skewness and kurtosis (Grouped and Ungrouped data), moments.	2
5.	Correlation and regression analysis	2
6.	Application of one sample t-test , Application of two sample t-test	2
7.	Chi-square test of goodness of fit ,Chi-square test of independence of attributes	2
8.	Selection of random sample using simple random sampling	2
	Total	16

Suggested Readings

- Elhance, D. N. Fundamentals of Statistics
- Agarwal, B. L. Basic Statistics
- Kapoor and Saxena Mathematical Statistics
- Singh and Verma Agricultural Statistics
- Hall and KniGHT Higher Algebra

Second Year B.Sc. (Community Science)

IV-SEMESTER

FSN 221

Normal and Therapeutic Nutrition

3(2+1)

Theory

S. No.	Topics	No. of lectures
1	Determination of nutritional requirements: recommended dietary allowance, calorie consumption unit, food exchange list method	2
2	Maternal nutrition, Physiological changes and nutritional requirements during pregnancy and lactation	3
3	Infancy :Growth, development and nutritional requirement, importance of breast feeding, weaning and supplementary foods	3
4	Pre-school children: Growth and development, food habits and nutritional requirements	2
5	School age child and adolescents: Growth and development, food habits and nutritional requirements	2
6	Geriatric nutrition :Physiological and psychological changes during old age, nutritional requirements and consideration for diet planning	2
7	Importance and modification of normal diet to therapeutic diets, Methods of feeding Normal and artificial.	2
8	Aetiology, symptoms and dietary management in acute and chronic fevers Typhoid, influenza, tuberculosis	3
9	Aetiology, symptoms and dietary management in gastrointestinal disorders Diarrhoea, constipation, peptic ulcer	3
10	Aetiology, symptoms and dietary management in liver diseases Hepatitis, jaundice, cirrhosis of liver	3
11	Aetiology, symptoms and dietary management in cardiovascular disease Atherosclerosis and hypertension	3
12	Aetiology, symptoms and dietary management in diabetes mellitus Problems of weight control, Overweight and obesity, dietetic management and prevention	4
	Total	32

Practical

S. No.	Experiments	No. of Practicals
1	Standardization of serving size portions	1
2	Planning and preparation of diets for different age groups-Infancy, preschool age, school age, adolescent, adult, old age	4
3	Planning and preparation of diets for pregnant and lactating women	3
4	Planning and preparation of diets for special occasion, Birthdays, festivals, packed lunches	3
5	Planning and preparation of diets for following diseased condition- diarrhea, constipation, hepatitis, hypertension, diabetes, mellitus, overweight/ obesity	5
	Total	16

Suggested Readings

- Raghuvanshi, R.S. and Mittal, M. (2014). Food Nutrition and Diet Therapy. Westvills Publication Delhi.
- Agarwal, A and Udipi, S. (2014). Text Book of Human Nutrition. Jaypee Medical Publication Delhi.

Theory

S. No.	Topics	No. of practicals
1	Food quality and quality attributes - Classification of quality attributes and their role in food quality, objectives, importance and functions of quality control, principles of quality assurance, quality assessment of raw materials.	3
2	International standards, Specifications and application of food standards for raw materials and food products . Grading and marking standards and specification for finished products.	3
3	Food laws and regulations, Prevention of Food Adulteration Act, Fruit Product Order, Agmark, Essential Commodity Act, Consumer Protection Act, Bureau of Indian Standards, Codex Standards, FSSAI.	3
4	Food additives, introduction and importance, classification of preservatives, colouring agents, emulsifying and stabilizing agents, leavening agents and antioxidants.	3
5	Various methods / techniques for the assessment of quality of different foods,	3
6	Food adulteration- introduction and various ways of adulteration.	2
7	Introduction to sensory analysis, general testing conditions, requirements of sensory laboratory, organizing sensory evaluation programme, selection of sensory panelists.	2
8	Factors influencing sensory measurements, Sensory quality parameters –Size, shape, texture, aroma, taste, color and gloss, threshold and dilution tests, different tests for sensory evaluation– discrimination, descriptive, affective, flavour profile and tests, ranking tests, methods of sensory evaluation of their food products.	3
9	Food grade standards for different processed products.	2
10	Food safety, risks and hazards. Assessment and prevention of food adulteration. Food packaging and packaging material, Labelling of food products	3
	Total	32

Practical

S. No.	Experiment	No. of practicals
1	Sampling techniques for collection of agriculture, horticulture and animal foods.	2
2	Collection of food samples from different sources.	1
3	Physical examination and grading of grains, spices etc for quality.	2
4	Exercise on identification of basic taste sweet, sour, salty and bitter, triangle test, Sensory evaluation techniques, duo trio test, score card method, Sensory evaluation of a food product.	2
5	Demonstration of objective tests for quality evaluation, Detection of food adulteration in grain samples and spices, oils and milk,	2
6	Collection of food products with artificial colouring and checking for quality.	2
7	Visit to quality control laboratory/ food processing industries and note the procedures and parameters used for quality assessment	3
8	Market Survey and Preparation of Scrap Book.	2
	Total	16

Suggested Readings

- Potter, N.N. (1996). Food Science. The AVI Publishing Company Inc., Westport, Connecticut.
- Jellinek, G. (1985). Sensory Evaluation of Foods: Theory and Practice. Ellis Horwood Ltd. Chichester, England.
- Manual of Food Standards and Quality Control. (2014). Dept. of Foods and Nutrition, CCS HAU, Hisar.
- Swaminathan, M. (1999). Food Science, Chemistry and Experimental Foods. 2nd ed. The Bangalore Printing and Publishing Co., Bangalore.
- Many, N.S. and Shadaksharswamy, M. (1996). Food Facts and Principles. 2nd ed. New Age International Pvt. Limited, New Delhi.
- Kalia, M. and Sood, S. (2010). Food Preservation and Processing. Revised edn. Kalyani Publishers, New Delhi.

HDFS 221

Developmental Challenges in Children

3(2+1)

Objectives

1. To orient the students to the etiology and developmental characteristics of children with developmental challenges.
2. To develop in the students the sensitivity for working with the developmentally challenged children.

Sr.No	Course title	Credit hours
1.	Definition of special needs children and special education, terminologies, history of special education	2
2.	current trends and issues in special education,	2
3.	Legislation and litigations of special education labelling- definition and its effects.	2
4.	Mainstreaming- definition, models, problems in implementation, effect of mainstreaming on children with special needs	2
5.	Definition, classification, prevalence, causes, measurement, psychological and behavioral characteristics and educational considerations, management for : a. Mental retardation b. Learning disabled children c. Emotional disorders d. Speech/communication disorders e. Visual disorders f. Physical and neurological impairment g. Multiple disorders	2
6.	Giftedness: definition, prevalence, origin, screening and identification, Psychological and behavioral characteristics of gifted children, attitudes towards gifted children, educational considerations for gifted children, managing child in school.	3
7.	Rights and provisions for children with special needs in India	2
8.	Early detection of deformities, Intervention- concept, methods, steps and process, intervention strategies for children with developmental challenges	3
9.	Role of professionals, need and importance of family centered intervention.	2
	Total	32

Practicals

Sr.No	Course title	Credit hours
1.	Observational visits to institutes for children with special needs	3
2.	Survey on early detection of deformities in local communities	2
3.	Developing educational material on identification of children with special needs	4
4.	Organizing education programmes for families of children with special needs	3
5.	planning, recreational and vocational activities for children with special needs	3
6.	Presentation of case study reports.	1
	Total	16

Suggested Readings

- Berdine, W.H. and Blackhurst, A.E. (1985). An introduction to special education. 2nd ed. Harper Collins, Lexington.
- Hallahan, D.P. and Kauffman, J.M. (1991). Introduction to exceptional children. 5th ed. Allyn and Bacon, Boston.
- Loring, J. and Burn, G. (Eds.). (1978). Integration of handicapped children in society. Routledge and Kegan Paul, London.
- Werner, D. (1994). Disabled Village Children (Indian edition). Voluntary Health Association of India, New Delhi.
- Philip, M. and Duckworth, D. (1985). Children with disabilities and their families: A review of research. Berks: NFER-NELSON Publishing Co., Windsor.
- Achenbach, T.M. (1982). Developmental psychopathology. 2nd ed. John Wiley, New York.
- Tinberger, N. and Tinberger, E.A. (1983). Autistic children: New hope for a cure. Allen and Unwin, London.
- Hegarty, S. (2002). Education and children with special need. Sage publication. New Delhi.
- Rozario, J. and Karanth, P. (2003). Learning disability in India. Sage publication. New Delhi.
- Prasad, J. and Prakash, R. (1996). Education of handicapped children, problems and solution. Kanishka publication distribution. New Delhi.

HDFS 222

Communication Skills and Personality Development

3(2+1)

Objectives

- To orient students about communication skills
- To strengthen the communication skills to be effective in presenting one self.
- To help the students in understanding and enhancing their personality.

Theory

S.No	Course title	Credit hours
1.	Communication skills-Concept	2
2.	Process of communication - A. Verbal communication: <ul style="list-style-type: none"> • Listening and note taking • Oral presentation skills • Reading and comprehension of general and technical articles • Individual and group presentations • Impromptu presentation • Public speaking • Group discussion B. Non Verbal communication : <ol style="list-style-type: none"> 1. Field Diary and lab record 2. Writing skills 3. Precise writing 4. Summarizing 5. Abstracting 	1 1 1 1 1 1 1 1 1 1 1
3.	Role of ICT in communication	1
4.	Recent advances in communication- <ul style="list-style-type: none"> • Print and electronic • Internet • E-mail, fax • Mobile • Interactive video and teleconferencing • Computer • E-governance 	1 1 1 1 1 1 1
5.	Meaning and definition of personality	1
6.	Theoretical perspectives on personality- <ul style="list-style-type: none"> • Behavioral trait and personality pattern, molding the personality pattern • Emotional Intelligence • Transactional Analysis 	1 1 1
7.	Personality development- <ul style="list-style-type: none"> • Self perception • Self concept • Self esteem and gender stereotyping • Persistence and changes in personality determinants (physical, intellectual, emotional, social, educational and family). 	1 1 1 1
8.	Aspirations, achievements and fulfillment	1
9.	Presenting oneself for formal and informal occasions	1
	Total	32

Practical

S.No	Course title	Credit hours
1.	• Listening and note taking, writing skills	1
	• Oral presentation skills	1
	• Field diary and lab record	1
	• Indexing	1
	• Footnote and bibliographic procedures	1
2.	• Reading and comprehension of general and technical articles	1
	• Precise writing	1
	• Summarizing	1
	• Abstracting	1
	• Individual and group presentations	1
3.	Developing questionnaire to study impact of physique, educational Status, aspirations on personality;	1
4.	Developing questionnaire to study social prescriptions, aspirations, achievements, gender and family on personality .	2
5.	Collecting data ,Report writing and presentation	2
6.	Practicing for Group Discussion and Interview	1
	Total	16

Suggested reading

- Stewart, W. 2002. Building self-esteem. Lacio Publishing House. New Delhi.
- Thomas, A. and Harrisen. 1973. I'm O.K. - You're O.K. Pan Books, London.
- Berk, L.E. (1993). Infants, children and adolescents. Allyn and Bacon, Baston.

RMCS 221

Housing and Space Management

3 (2+1)

Objectives

- To apply basic knowledge of principles involved in planning in a residential place.
- To make students aware of the trends and functional designing of residential building.

Theory

S. No.	Topic	No. of classes
1.	Housing and its importance, characteristics and effect of insufficient housing. Factors to be considered in selection of family housing, selection of site, housing needs at different stages of family life cycle.	4
2.	Housing problems – rural and urban housing problems in India. Housing legislation and regulation – Building Bye Laws, Building Act 1984, Defective Premises Act 1972, Disability Discrimination Act 1995, Environment Protection Act etc.	4
3.	Housing policies - government and non- government housing policies and housing schemes.	3

S. No.	Topic	No. of classes
4.	Housing standards – sanitary facility, food preparation and refuse disposal, space and security, thermal environment, illumination and electricity, structure and material, interior air quality, water supply, lead based paints, access, site and neighborhood, sanitary condition and smoke detectors.	4
5.	Types of house planning – floor plan, site plan, cross sectional plan, perspective plan, elevation plan and landscape plan.	3
6.	Housing finance - government and non- government finance institutes. Advantages and disadvantages of renting and owning a house.	3
7.	Technology in housing – advance technology in housing construction, low cost building technology, low cost building materials.	3
8.	Economy in housing construction – principles of house planning (orientation, privacy, grouping, roominess, sanitation, ventilation, flexibility, circulation, economy, furniture requirement).	4
9.	Ergonomics and housing - space management and Interior types based on functional needs – interior for youth, elderly and other special needs, functional design of areas in interior.	4
	Total	32

Practical

S. No.	Topic	No. of classes
1.	Learning architectural symbols.	3
2.	Drawing of house plans for different income levels and activity groups.	3
3.	House plan for renovation according to needs of residents.	3
4.	Designing of kitchen, bathroom etc. for special needs.	3
5.	Market survey to study the available building materials in the local market	4
	Total	16

Suggested Readings

1. Agan, T. 1970. The House Plan and Use. J.B. Lippincott and Company, New York.
2. Bhargava, B. 2001. Family Resource Management and Interior Decoration. University Book House Ltd. Jaipur.
3. Bhargava, B. 2001. Housing and Space Management, University Book House Ltd. Jaipur.
4. Cherunilam, F. and Heggade, O. (1987). Housing in India. Mumbai: Himalaya Publishing.
5. Deshpande, R.S. 2000. Build Your Own House. United book Cooperation, Pune.
6. Dorothy Stepat – Devan, Kathryn Camp Logan, Darlene M. Kness, Laura Szekely. Macmillan Publishing Co., Inc, New York.
7. Faulkner, R. and Faulkner, S. (1975). Inside Today's Home. New York: Rinehart and Winston.
8. Mathur, G.C. (1993). Low Cost Housing in Developing Countries. New Delhi: Mohan Pramlani, Oxford and IBH.
9. Mohanty, A.B. 1985. Guide to House Buildings. Inter India Publications, New Delhi.
10. Singh, G. 1985. Bhavan Nirman Samagri, Standard Publishers Distributors, Delhi.
11. Varghese, M.A. Ogale, N. and Shrinivasan, K, 2000. Home Management First Ed. New Age International, Ltd., New Delhi.

Objectives

1. To acquaint students with anthropometry study related to man machine and environment system interactions.
2. To study about the drudgery reduction of farm women through appropriate technologies.

Theory

S. No.	Topic	No. of classes
1.	Work-worker and workplace relationship	1
2.	Work simplification techniques	1
3.	Definition of ergonomics, principles of ergonomics and its application	1
4.	Household drudgery- definition, drudgery prone areas in home, farm and allied activities, drudgery reduction.	2
5.	Household equipment- introduction, definition, classification and base materials used in construction.	2
6.	Impact of household equipments on work, worker and environment	2
7.	Equipment design and its effect on body posture	2
8.	Energy– definition, classification and sources, causes of energy crisis and solutions, status of energy crises in India and abroad.	2
9.	Renewable and non renewable energy saving technologies	2
10.	Ways and methods in the reduction of energy consumption in household farm and community	1
Total		16

Practical

S. No.	Topic	No. of classes
1.	Use and care of common household appliances- refrigerator, washing machine, vacuum cleaner, oven etc.	5
2.	Demonstration of solar household technologies, biogas, zero energy cool chambers etc.	5
3.	Motion Studies – process chart, operational chart etc	4
4.	Maximum and minimum height of working area	2
Total		16

Suggested Readings

1. Grandjean, E. (1981). Ergonomics of the Home Taylor and Francis Ltd. New York.
2. Grandjean, E. and Kroemer, K.H.E. (1999). Fitting the Task to the Human a Text Book of Occupational Ergonomics. Taylor and Francis, New York.
3. Peet, I.J and Arnold, M.G. (1993). Household Equipment. John Wiley, New York.

4. Science and Technology for Women. (1993). Compiled by Center of Science for Village. Waradha. Department of Science and Technology, New Delhi.
5. Singh, S. (2007). Ergonomics Integration for Health and Productivity. Himanshu Publication, Udaipur, New Delhi.
6. Steidle, Roze and Bratton. (1968). Work in the Home. John Wiley and Sons Inc. New York.
7. Swanson, Bettye. (1983). Introduction to Home Management Macmillan Publishing Co. Inc. New York.
8. Varghese, M.N., Ogale, N.N. and Srinivasan, K. (1992). Home Management. Wiley Eastern, New Delhi.
9. Gandotra, G., Oberoi, K. and Sharma, P. (2008). Appropriate technology for rural women.

EECM 221

Diffusion and Adoption of Homestead Technologies

3 (2+1)

Objectives

1. To develop understanding regarding concept of diffusion, innovation and adoption process.
2. To develop understanding about utility of homestead technologies.
3. To develop competence in diffusion of need based homestead technologies among rural families

Theory

S. No.	Topic	No. of classes
1.	Concept and elements of diffusion process	3
2.	Adoption- definition, adoption process, Innovation–decision process	3
3.	Types of innovation–decision	1
4.	Consequences of innovation	2
5.	Factor affecting adoption of an innovation	3
6.	Different terms used in diffusion of innovation and adoption process: Rate of adoption, over adoption, innovativeness, dissonance, rejection, discontinuance	3
7.	Adopter categories -concept and types	3
8.	Homestead technology- concept and its relevance to innovation – decision process	3
9.	Different channels of communication and their characteristics	3
10.	Change agents and opinion leader; change proneness – acceptance and resistance to social change	3
11.	Different homestead technologies with special reference to Home Science	3
12.	Constraints in adoption of technology	2
	Total	32

Practical

S. No.	Topic	No. of classes
1.	Collection of homestead technologies	3
2.	Survey on adoption of homestead technologies in community	3
3.	Diffusion of need based homestead technologies among rural families	5
4.	Identification of change agents in locality	2
5.	Preparation and presentation of report	3
	Total	16

Suggested readings

1. Dasgupta, S. 1989. Diffusion of Agriculture Innovations in villages India, Wiley Eastern Ltd. New Delhi.
2. Environmentally Sound Technologies for Women in Agriculture, 1996. Published by International Federation of women in Agriculture, New Delhi, India and International Institute of Rural Reconstruction, Silang Cavite, Philippines, Printed in India, ISBNO 942717-69-4
3. Reddy, A. A. 1993. Extension Education. Shri Laxmi Press, Bapatla, Guntur, AP.
4. Rogers, E. M. 1985. Diffusion of innovations. The Free Press, New York.

TAD 221

Textile Finishes, Dyeing and Printing

2(1+1)

Objectives

1. To impart the knowledge of textile finishing used on different fabrics.
2. To acquire knowledge of dyeing and printing processes used in textiles.
3. To develop the aesthetic sense in decorating the textiles.
4. To develop skill of dyeing and printing techniques.

Theory

S.No.	Topic	No. of Classes
1	Textile finishing: Definition and its importance	1
2	Classification of textile finishes: Chemical, mechanical, temporary, permanent, durable, renewable, semi permanent, reactive and additive finishes	1
3	Processes of removing impurities from fabrics: Scouring, desizing, degumming, carbonizing, souring	1
4	Basic finishes that alter hand or texture: Fulling /milling, felting, singeing, stiffening, decatizing	1
5	Surface finishes: Bleaching, delustering, calendering, beetling, napping, flocking, burnt out design, acid design, plisse design, tentering, shearing and brushing	2

S.No.	Topic	No. of Classes
6	Functional finishes: Water proof and water repellent finish, shrinkage control, wrinkle resistance, anti-static finish, anti-microbial finish, durable press and flame retardant finish	2
7	Dyes and pigments, classification of dyes	1
8	Application of dyes: direct, acid, basic, vat, azoic, mordant, sulphur, reactive and disperse dyes	2
9	Dyeing techniques and equipment: Solution dyeing, fibre dyeing; tow and stock dyeing, yarn dyeing; skein and package dyeing and piece dyeing	2
10	Styles of printing: Direct, discharge and resist printing,	1
11	Printing methods and equipment: Block, screen, stencil, roller, heat transfer printing, tie and dye and batik	2
Total		16

Practical

S.No.	Topic	No. of Classes
1	Finishing of cotton fabric Scouring Bleaching Mercerization	2
2	Tying and dyeing of cotton fabric with direct dye	2
3	Fabric designing by batik technique with naphthol dye	3
4	Printing of cotton fabric using different methods	
	Block	2
	Stencil	3
	Screen	3
	Heat transfer	1
Total		16

Suggested Readings

- Hollen, N. and Saddler, J. 1968. Textiles. New York. Macmillan Company.
- Joseph, M. L. 1986. Introductory textile science. 5th ed. New York. CBS College Publishing.
- Koushik, C.V and Josico, A.I. 2003. Chemical processing of textiles: Preparatory processes and dyeing. NCUTE. New Delhi.
- Labarthe, J. 1969. Textiles: Origins to Usage. New York. McMillan Company Ltd.
- Potter, M.D. and Corbman, B.P. 1967. Textiles: Fibre to fabric. New York. Macmillan Hill Co.
- Shenai, V.A. (2000) Chemistry of dyes and principles of dyeing. Mumbai Sevak Publications.
- Stout, E.E. 1970. Introduction to textiles. 3rd ed. New York. John Wiley and Sons, Inc.
- Tortora, P.G. 1978. Understanding textiles. New York. Macmillan Publishing Company.
- Vankar, P.D. 2006. Handbook on natural dyes for industrial applications. New Delhi. National Institute of Industrial Research.
- Vilensky, L. D. and Gohl, E. P.G. Textile Science. Delhi. CBS Publishers and Distributors.
- Wingate, I. B. 1970. Textile Fabrics and their selection. 6th ed. New Jersey. Prentice Hall Inc.
- Wynne, A. 1997. Textiles. London. Macmillan Education Ltd. 310 p.

Third Year B.Sc. (Community Science)
V-SEMESTER

FSN 311

Food Hygiene and Sanitation

2 (1+1)

Theory

S. No.	Topics	No. of Practicals
1	Meaning, Principle, Concept and significance of hygiene and sanitation in relation to food industry.	1
2	Water Requirement and use, sources of water supply, water pollution, purification of water, portable water and its quality-Criteria and standards, hardness of water and its treatment, defluoridation of water, Domestic and Industrial. Food and water borne infections. Prevention and control.	3
	Food grade standards for different processed products.	1
3	Food storage general guidelines and storage of specific foods. principles of hygiene and sanitation- sanitary procedures while preparation, cooking, and holding food, serving and displaying food, specific food operations.	2
4	Food hygiene: Contamination of foods from various sources Green plants and fruits, animals, sewage, soil, air and water and their health hazards	2
5	Food spoilage : causes of spoilage of Perishable, semi perishable and non perishable foods	1
6	Personal hygiene and food handling habits of personnel Sanitary procedures for preparation, handling and storage of foods.	2
8	Food poisoning caused by bacteria: <i>Salmonella</i> , <i>Staphylococcal poisoning</i> , <i>Botulinum</i> , <i>Clostridium perfringens</i> and <i>B cerus</i> , Sources, incubation period, mechanism of action	2
9	Food Poisoning, prevention and control, Food Poisoning caused by agents other than microorganism, Poisonous plants, animals, chemicals, metals and pesticides etc.	2
	Total	16

Practical

S. No.	Experiments	No. of practicals
1	Drawing and labeling of structures of common microorganism in food for identification	3
2	Demonstration on preparation of slides, preparation of media	3

S. No.	Experiments	No. of practicals
3	Collection of water samples. Demonstration on testing of water for: (i) Physical quality (ii) Bacteriological quality	3
4	Survey of hygienic and sanitary condition in food shops/food vendors	2
5	Visit to Food Industries	3
6	Report writing	2
	Total	16

Suggested Readings

- Adams M.K. and Moss M.O. (2000). Food Microbiology, New Delhi: Panima Corp.
- Longree K.L. and Blaker G.C. (1982). Sanitary Techniques in Food Service. New York: John Wiley and Sons.
- Park, K. (1997). Textbook of Preventive and Social Medicine. 1st Ed. Jabalpur: Banarsidas Bhanot.

FSN 312

Clinical Nutrition and Dietetics

3(2+1)

Theory

S. No.	Topics	No. of lectures
1	Clinical Nutrition- Introduction, nutritional status and disease	2
2	gastro intestinal tract diseases- Introduction, different organs and diseases, diagnostic procedure	2
3	diseases of mouth and oesophagus	2
4	diseases of stomach and duodenum	2
5	diseases of small and large intestine	2
6	Diverticulitis, malabsorptive syndrome and tropical sprue	3
7	pancreatitis	1
8	chronic obstructive pulmonary disease	2
9	cardio vascular disease: risk factors, lipo and apo proteins, role of nutrients in preventing atherosclerosis, major enzymes used for diagnosis, congestive heart failure	3

S. No.	Topics	No. of lectures
10	renal disease. Functions of the kidney, nephritis, urinary calculi, types of renal failure, dialysis.	3
11	Cancer. Causes of cancer cell development, impact of tumor on host metabolism, systematic effects of cancer.	3
12	Burns. Physical destruction of skin, metabolic aberrations, alteration in nutritional requirement	3
13	interaction between nutrients, infection and drugs.	2
14	Calcium and Vitamin D deficiency	2
	Total	32

Practical

S. No.	Experiments	No. of Practicals
1	Estimation of albumin, glucose, ketone bodies, creatinine and creatine in urine	4
2	Interpretation of report of blood and urine in different disease conditions	3
3	Determination of bile pigments and bile salts in urine	2
4	Visit to Clinical Lab for Estimation of total protein, albumin,	2
5	Visit to Clinical Lab for Estimation of total cholesterol, HDL, LDL, TG in blood	2
6	Estimation of haemoglobin in blood	1
7	Assignment and presentation	2
	Total	16

Suggested Readings

- ICCIDD/UNICEF/WHO. (2001). Assessment of IDD and monitoring their elimination. A guide for programme managers.
- Bamji, S.M., Rao, P.N., and Reddy, V. (2003). Textbook of Human Nutrition. Oxford and IBH Publishing Co Pvt Ltd.
- Bhavana, S. (1999). Nutrition and clinical care. New Delhi Commonwealth Publishers.
- Gibney M.J, Margetts BM, Kearney J.M and Arab L. (2004). Public Health Nutrition. Publishers Blackwell Science.
- Jean-FZ. (2005). Clinical Nutrition. UK Blackwell Publishing Company.
- Jim M. and Stewart TA (2007). Essentials of Human Nutrition. 3rd edn. New York, Oxford University Press.
- Miguel, A.G. and Eduard, C. (2005). Clinical Nutrition. UK, Blackwell Publishing Company.
- Weinsier and Butterworth (1981). Hand Book of Clinical Nutrition. London, C V Mosby Company.

Objective

1. To orient the students regarding significance, scope and methods of family counseling
2. To orient the students regarding various welfare services and legal provisions

S. No.	Course title	Credit hours
1.	Concept, nature, scope, principles and need of family counselling	2
2.	Types of family counseling: Educational, Vocational, Social, Personal, Premarital and Marital	3
3.	Methods of Family counseling, Problems encountered during the process of family counseling.	3
4.	Qualities of a good counselor	1
5.	Situational analysis of child, women, youth, elderly, disabled and reserved category in India-Issues and challenges	3
6.	Determining factors for the present status, impact of present status on the family and society at large.	2
7.	Definition, need, constitutional, provisions, legislations, schemes/projects and policies and other activities pertaining to: <ol style="list-style-type: none"> a. Child Welfare b. Women Welfare c. Youth Welfare d. Elderly Welfare e. Disabled/Exceptional Pupil Welfare 	3 2 2 2 3
8.	Legislations pertaining to reserved category, schemes/projects and policies for reserved category	2
9.	National and international organizations and agencies working for child, women, youth, elderly and disabled welfare: UNICEF, WHO, CARE, DWACRA, NIPCCD, CIF etc.	4
	Total	32

Practicals

S.No	Course title	Credit hours
1.	Visits to organizations offering counseling to families	4
2.	Studying the areas of family counseling,	2
3.	identifying the families which are in need of counseling,	2
4.	Observing counseling sessions to families, presentation of reports.	4
5.	Visits to various government and non government organizations working for the welfare of the children, Presentation of reports.	4
	Total	16

Suggested Readings

- NIPCCD. (1994). Child in India: A statistical profile. NIPCCD, New Delhi.
- Randhawa, M.S. (1991). The Rural and urban aged. National Book Organization, Unit IX, New Delhi.
- Saraswathi, S. (1991). Youth in India. ICSSR, Govt. of India, New Delhi.
- TISS (1994). Enhancing the role of family as agency for social and economic development. TISS Bombay. Vol. II, Part II.
- UNICEF. (1990). Children and women in India: A situation analysis. Unit VI, VII.
- Marasimhan, S. (2001). Employment of women. Sage publication. New Delhi.
- Boraian, P.M (2008). Employment of rural women. Concept publishing company. New Delhi.
- Mehta, L.P and Jaiswal, S.S. (2001). Child labour and the laws. Deep and Deep publication. New Delhi.
- Devi, L. (1998). Child and family welfare. Anmol publication. New Delhi.
- Devaisia, L. (1991). Girl child in India. Ashish publishing house. New Delhi.
- Down, W.S. (2006). Child welfare and family services. 8thedi. Pearson education publishers.
- Pecora, J.P. (2009). The child welfare challenge: Policy, practice and research. Aldine transaction publisher.
- Kapoor M. (2011). Counseling children with psychological problems. Pearson Education India.
- Puri S. (2004). Child development and welfare services. Pointer publishers. Jaipur(India)
- Dav M.I. (1984). Introduction to Child Welfare and Counseling. Himanshu Publisher. New Delhi.

RMCS 311

Residential and Commercial Space Design

3 (2+1)

Objectives

- To give an insight about the designing of various types of residential and commercial buildings.
- To learn about making various types of conceptual drawings of residential and commercial buildings.

Theory

S. No.	Topic	No. of classes
1.	Design and space organization analysis of independent house of different income groups.	3
2.	Design and space organization analysis of apartments and flats.	3
3.	Understanding on building regulations and specifications essential for building, and service management.	3
4.	Selecting materials and finishing scheme for interiors.	2
5.	Estimation of cost of fittings, fixtures, furniture, lighting and materials for interior finishing.	4
6.	Estimation of cost of fittings, fixtures, furniture, lighting and materials for commercial buildings.	4
7.	Appraisal on space needs in commercial buildings.	3
8.	Study of commercial interiors for business establishments, hotels/restaurants, hospitals, educational buildings, public service buildings	4
9.	Specifications writing- writing detailed clause by clause	3
10.	specification for materials pre and post execution, tests, mode of measurements, manufacturers details and specifications etc.	3
	Total	32

Practical

S. No.	Topic	No. of classes
1.	Develop conceptual drawings and floor plans for various income groups.	3
2.	Develop layouts of furniture, lighting, electrical and plumbing for various income groups.	3
3.	Practical applications of design and space organization of apartments and flats and analysis.	2
4.	Cost estimation for designing interiors of various income groups.	2
5.	Planning of ergonomic work layout for a small project	1
6.	Evolving interior decoration details with material sample for the small, large (commercial) and hill area projects.	3
7.	Presentation of the detailed work done for the small, large (commercial) and hill area projects.	2
	Total	16

Suggested Readings

1. Bonda P. and Sonsnowchik K. (2007).Sustainable Commercial Interiors.John Wiley and Sons Publication.
2. Carol Simpson, Estimation for Interior Designers, Watson Guptill, Rev. Sub edition, 2001.
3. Crafti. (2004). The office – Designing for Success. 2004. Images Publication
4. Francis, D. (1997). The New Office. Conran Octopus Publication
5. Harmon. S and Kennon, K. The Codes guidebook for Interiors.Fifth Edition.John Wiley and Sons Publication.
6. Leibing W. Ralph(1999). Architectural Working Drawings ,4th edition John Wiley and sons, New York .
7. Piotrowski, C. and Rogers, E. (1999).Designing Commercial Interiors.Second Edition.John Wiley and Sons Publication.

RMCS 312

Economics and Marketing

3(2+1)

Objectives

- To understand the role of Societies, governments, businesses, households, and individuals in allocating their scarce resources for governing economic activities of the country.
- To develop marketing skills in the context of economic activities performed.

Theory

S. No.	Topic	No. of classes
1.	Terms and definitions in Economics	2
2.	Consumption, demand and supply.	2
3.	Factors affecting production.	2
4.	Gross Domestic Product (GDP).	2

S. No.	Topic	No. of classes
5.	Marketing: <ul style="list-style-type: none"> • Definition • Marketing process • Need for marketing • Role of marketing • Marketing functions • Classification of markets • Marketing of various channels • Price spread 	1 1 1 1 1 1 1 1
6.	Marketing efficiency, integration	3
7.	Constraints in marketing of agricultural produce,	3
8.	Market intelligence, bank norms, insurance,	3
9.	SWOT analysis,	2
10.	Crisis management.	3
11.	Techno-economic parameters for preparation of projects and basic guidelines for preparation of project report.	2
	Total	32

Practical

S. No.	Topic	No. of classes
1.	Techno-economic parameters for preparation of project.	3
2.	Preparation of bankable projects for various agricultural products and its value added products.	3
3.	Identification of marketing channel,	2
4.	Calculation of price spread	2
5.	Identification of market structure	3
6.	Visit to different markets.	3
	Total	16

Suggested Readings

- Ahuja, H. L. 2000 Modern Microeconomics – Theory and application. S. Chand and Company Ltd., New Delhi.
- Dewett, K. and Verma J. D. 2005. Elementary Economic Theory: S. Chand & Co. New Delhi.
- Gross, I. H. Crandall, E. W. and Knoll, M. M. 1995. Management for Modern Families. Prentice Hall, Inc. New Delhi.
- Kaur, S. Lekhi, R. K. and Singh, J. 2001. Consumer Economics, Kalyani Publisher, New Delhi.
- Kotler P. 2004. Marketing Management. Eleventh Edition. Pearson Education (Singapore) Pvt. Ltd. Indian Branch Patpargang, Delhi.
- Nickell, P. and Dorsey J. 2002. Management in Family Living. John Willey and Sons, New York.
- Seetharaman, P. and Sethi, M. 2002. Consumerism Strategies and Tactics, CBS Publishers & Distributors, New Delhi.
- Sherlekar, S. A. 2004. Marketing Management. Himalaya Publishing House, Mumbai.

Objectives

- To develop understanding about sociological concepts with special reference to rural community.
- To understand factors of social transformation and planned social change

Theory

S. No.	Topic	No. of classes
1.	Sociology and rural sociology – meaning & significance.	2
2.	Difference between rural, urban and tribal community	3
3.	Indian rural social stratification <ul style="list-style-type: none"> • Caste & Class – Concept, characteristics and difference • Changes in social stratification and its role in economy & Policy. 	3 3
4.	Indian rural institutions <ul style="list-style-type: none"> • Social – Family & Marriage • Economic • Political 	3 3 3
5.	Rural poverty- Meaning & Causes.	2
6.	Religion- Concept, beliefs, traditions and customs	3
7.	Rural social change- <ul style="list-style-type: none"> • Concept, process and factors of transformation. • Planned social change. 	3 2
	Total	32

Suggested Reading

- Chitambar, J.B. (1973). Introductory rural sociology. New York, John Wiley and Sons.
- Desai, A.R. (1978). Rural sociology in India. Bombay, Popular Prakashan, 5th Rev. ed.
- Doshi, S.L. (2007). Rural sociology. Delhi Rawat Publishers.
- Jayapalan, N. (2002). Rural sociology. New Delhi, Altanic Publishers.
- Sharma, K.L. (1997). Rural society in India. Delhi, Rawat Publishers
- Sachdeva, D. R. and Bhushan, V. (2007). An Introduction to Sociology. Kitab Mahal Agency.

Objectives

1. To develop awareness among students about garment designing.
2. To develop skills in various fabric construction techniques.
3. To develop awareness among students about fashion accessories.
4. To impart skill in designing various fashion accessories.

Practical

S.No.	Topic	No. of Classes
1	Selection of figure template for men, women and children	1
2	Designing of garments for women using different construction features: collar, sleeve, neckline	3
3	Designing of garments for men using different construction features: shoulder yoke, collar, sleeve, cuff	4
4	Designing of garments for children using different construction features: Yoke, gather, pleats, tucks, shirring, smocking, trimmings	4
5	Drafting and construction of following garments for women, men and children <ul style="list-style-type: none"> • Fancy frock, • Salwar/ pyjama/pyjama • Kurta (gents)/kameez (ladies) • Night dress/ gown. 	3 3 3 3
6	Accessories: introduction and classification; footwear, hand bags, belt, jewelry, gloves, hats, scarves and umbrella	3
7	Designing of accessories for women, men and children	3
8	Selection of designs for construction of accessories	2
9	Accessories Construction of one accessory each for <ul style="list-style-type: none"> • Women, • Men and • Children 	4 4 4
Total		48

Suggested Readings

- Beitler, E. J. and Lockhart, B. 1961. Design for you. 2nd ed.
- Bhatnagar, P. 2005. Decorative Design History in Indian Textiles and Costumes. Chandigarh. India. Abhishek Publications. 41-43 pp.
- Goldstein, H. and Goldstein, V. 1954. Art in Everyday life. 4th ed. New York. Macmillan Publishing Co., Inc. pp – 515.
- Graves, M. 1951. Art of Colour and design. 2nd ed. New York. McGraw- Hill Company. pp – 438.
- Peacock, J. 2000. Fashion accessories- The complete 20th century source book. London. Thames and Hudson.
- Meadows, C. S. 2003. Know your fashion accessories. NewYork. Fairchild books.

Objectives

1. To acquaint students about various aspects of fashion.
2. To give knowledge about retailing and merchandising in fashion industry.

Theory

S.No.	Topic	No. of Classes
1	Retailing and merchandizing- Terminology, concept and principles Factors affecting merchandizing	2
2	Role and responsibilities of merchandiser	2
3	Merchandizing for buying house, departmental stores and export houses.	2
4	Evolution of retail and retail formats	2
5	marketing research: Meaning, scope and classification, steps in marketing research	2
6	Role of marketing research in product planning	2
7	Sale promotion and promotion mix: advertizing, sale promotion technique, personal selling and publicity	2
8	Pricing methods and pricing of textile	2
Total		16

Practicals

S.No.	Topic	No. of Classes
1	Market analysis through visit to retail and wholesale textile market, show rooms, chain stores, factory outlets, niche stores, boutiques and reporting	8
2	Developing display techniques for visual merchandising of apparel and textiles and presentation	8
Total		16

Suggested Readings

- Cooklin, G. 1991. Introduction to clothing manufacture. London. Blackwell Science Ltd.
- Easey, M. 1995. Fashion marketing. Oxford (U.K.) Wiley-Blackwell.
- Kotler, P. and Keller, K.L. 2006. Marketing management. 12th ed. New Delhi. Prentice Hall of India Pvt. Ltd.
- Nickles, W.G. 1982. Marketing principles. II ed. New Jersey. Prentice Hall Inc. Eaglewood Cliffs.
- Phillips, C.F and Duncan, D.J. 1956. Marketing principles and methods. II ed. U.S.A.
- Pradhan, S. 2009. Retailing management. 3rded. New Delhi. Tata McGraw-Hill Publishing Company Ltd.
- Ramaswamy, V.S. and Namakumari, S. 2004. Marketing management- Planning, Implementation and Control. 4thed. New Delhi. Mcmillan India Pvt. Ltd.
- Richard D. Irwin Inc.

Third Year B.Sc. (Community Science)

VI-SEMESTER

FSN 321

Community Nutrition and Education

3 (2+1)

Theory

S. No.	Topics	No. of lectures
1	Basic concept of community nutrition role of nutritionist in improving nutrition in community	2
2	Major nutritional problems prevalent in India and the state, Iron deficiency anaemia, Vitamin A deficiency, Iodine deficiency disorders, Calcium and vitamin D deficiency Flourine deficiency and toxicity	2 2 2 2
3	Malnutrition- Definition and causes, PEM, Marasmus, Kwasiorkor, vicious cycle of malnutrition	3
4	Assessment of nutritional status: Clinical signs and symptoms, Nutritional anthropometry, Growth monitoring Biochemical tests, biophysical tests, Diet survey methods Understanding of Z tables ADDED	2 2 2 2
5	National programmes and policies, role of national and international agencies in improving nutritional status of the community, Integrated Child Development Service (ICDS), supplementary Nutrition Program (SNP), Applied Nutrition Program (ANP), Mid Day Meal Program (MDMP), Vitamin A Prophylaxis Program, Anaemia Prophylaxis Programme, Food and Agricultural Organization (FAO), World Health Organization (WHO), United Nations Children's Fund (UNICEF), UNDP, CARE and other Voluntary and Government Agencies	3 3 3
6	Nutrition education- Objectives, principles and importance of nutrition education in a community.	2
	Total	32

Practical

S. No	Experiments	No. of Practicals
1.	Assessment of nutritional status of an individual/community using anthropometry and dietary survey A) Preparation of schedule B) Survey work C) Analysis of data D) Writing of report ADDED	2 2 2 2
2.	Visit to local health centre to identify clinical signs and symptoms of nutritional problems	1
3.	Visit to an ICDS Block, Anganwadi centers and evaluation of feeding provided at these centers ADDED	1
4.	Preparation and use of instructional material- radio script; Charts, posters, calendars, flipcharts, popular article; pamphlets.	2
5.	Practicing use of nutrition education material on vulnerable groups in the community, rural and urban	1
6.	Planning, implementation and evaluation of nutrition education for a target group	3
	Total	16

Suggested Readings

- Potter, N.N. and Hotchkiss, J.H. 1997. Food Science. CBS Publication, New Delhi.
- Srilakshmi, S. 2003 Food Science. 3rd ed. New Age International (P) Ltd. Publication.
- Kalia, M. 2002. Food Analysis and Quality Control. Kalyani Publication, Ludhiana, India
- Vijaya Khader 2001. Text Book of Food Science and Technology, ICAR.
- Swaminathan M. 1995. Food Science, Chemistry and Experimental Foods. Bangalou Printing and Publishing Co.
- Jacob M. Safe Food Handling -A Training Guide for Managers, WHO, Geneva.
- Sehgal, S. and Raghuvanshi, R.S. (2007) Text Book of Community Nutrition. ICAR, New Delhi

FSN 322

Food Analysis

3(1+2)

Theory

S. No.	Topics	No. of lectures
1	Sampling and sampling techniques	1
2	Proximate analysis- Moisture, ash, crude fat, crude fibre, crude protein and carbohydrates by difference	2
3	Principles and methods of food analysis	1

S. No.	Topics	No. of lectures
4	Basic principles: Refractometry, polarimetry, densitometry, HPLC, GLC, spectrophotometry, electrophoresis, automatic amino acid analyzer	2
5	Determination of starch	1
6	Test for unsaturation of fats, rancidity of fats	1
7	Quantitative analysis of protein by Biuret method, Ninhydrin method, Lowry's method and Dye-binding method	2
8	Bioassays for protein quality of grains.	1
9	Chemical, microbiological, fluometric and colorimetric methods of analysis of fat soluble and water soluble vitamins	2
10	Principles and methods for estimation of minerals: Atomic absorption spectroscopy, colorimetric, titrimetric and gravimetric methods	2
11	Methods for determining physical and rheological properties of food.	1
	Total	16

Practical

S. No.	Experiments	No. of Practicals
1	Proximate analysis: Moisture, ash and carbohydrate by difference	4
2	Demonstration of kjelplus, fibreplus, sox-plus	4
3	Estimation of sugar content of fruit and reducing and non-reducing sugars in cereals	4
4	Estimation of starch content of cereals Determination of iodine value and saponification number of fats	4
5	Estimation of minerals, iron, calcium and phosphorus	4
6	Estimation of vitamins: Ascorbic acid, thiamine, beta-carotene	4
7	Protein quality analysis, in-vitro method	4
8	Physical test for grain quality and rheological properties of foods	4
	Total	32

Suggested Readings

- AOAC. (2000). Association of Official Analytical Chemists. Washington, DC.
- Pearson, D. (1973). Laboratory Techniques in Food Analysis. Butterworths and Co., London
- Pomeranz and Yeshajahu. (1987). Food Analysis Theory and Practice. 2nd ed. AVI Publ.Company, Westport.
- Joslyn, M.A. (1970). Methods in Food Analysis: Physical, Chemical and Instrumental Methods of Analysis. Academic Press. New York
- NIN. (2003). A Manual of Laboratory Techniques.

Objectives

1. To orient the student regarding significance, scope, concepts and theories of educational psychology and its practical implications.
2. To develop an understanding regarding the significance of early childhood years.
3. To expose the students to the age wise developmental characteristics of young children and their implication for ECCE care and education.
4. To equip the students to plan and conduct Early Childhood care and Education, Programme.

Theory

S. No.	Course title	Credit hours
1.	Educational psychology- Meaning, nature, scope and importance of educational psychology	2
2.	History of its evolution, abroad and in India	1
3.	Recent trends and challenges in educational psychology	1
4.	Concept of learning- definition, essential features, types of learning, laws of learning, principles of learning ,learning environment	2
5.	Sensation, Perception, Imagination, Attention and Memory, Remembering and Forgetting, Reasoning and Thinking, Problem Solving, Information Processing	2
6.	Reinforcement- definition, types of reinforcements, schedules of reinforcement, importance of negative and positive reinforcement in learning,	2
7.	Motivation- definition, types, modes of motivation (contingency contract, token economy) relationship of motivation with learning and performance	2
8.	Discipline- meaning, need, functions and essentials in discipline, techniques of discipline, factors influencing choice of disciplinary techniques	2
9.	Theories for classroom teaching and its applicability(Jerome Bruner, Robert Gagne, Jean Piaget)	2
10.	Theories of learning Erik Erikson, Lev Vygotsky, , Kohlberg(Educational Implications)	2
11.	Early Childhood Education: Meaning and significance	2
12.	Different types of Pre School programmes: Montessori, Kindergarten, Nursery, Pre-Basic, Balwadi	2
13.	Curriculum models of ECCD	2
14.	Activities to promote all round development of preschool children- cognitive, language, socio-emotional and motor development	2
15.	Programme planning in ECE- Steps and types of programme planning	2
16.	Role, qualities and responsibilities of an early childhood personnel	2
17.	Monitoring and Evaluation of ECCD programme	2
	Total	32

Practical

S.No	Course title	Credit hours
1.	Analysing effect of reinforcement, motivation, discipline on learning	4
2.	Application of different methods of evaluating performance and interpretation.	2
3.	Observation and recording of activities in ECE center.	2
4.	Developing and conducting activities to promote all round development- Gross and fine motor skills, cognitive skills, language skills and creativity and socio emotional skills.	4
5.	Preparation of suitable teaching learning material used for Pre-school children	4
	Total	16

Suggested Readings

- Mertens, M.D. (2014), Research and evaluation in education and Psychology. Sage publication.
- Papalia, D.E. and Olds, S. W. (2008). Human development. 11thed. McGraw Hill. New York.
- Mazur, J.E. (1989). Learning and behaviour. Prentice Hall, New Delhi.
- Klausmier, H.J. (1985). Educational psychology. Harper and Row, New York.
- Dubious, N.F. (1979). Educational psychology and instructional decisions. Dorsey press.
- Narang D; Purohit S & Koradia K (2008). Early childhood care and development, Shivam Book Depot, Jaipur
- Swaminathan, M. (ed.) (1998). The First Five Years: A Critical Perspective on Early Childhood Care Education in India. Sage Publication. New Delhi.
- Grewal, J.S. (1984) Early Childhood Education – Foundation and Practice. National Psychological Corporation Agra.

RMCS 322 Entrepreneurship Development and Business Management 3(2+1)

Objectives

- To learn about the importance of entrepreneurship Development and Business Management in the development of Indian economy
- Creating awareness regarding entrepreneurial traits, entrepreneurial support system, opportunity identification, project report preparation and understanding of legal and managerial aspects.

Theory

S. No.	Topic	No. of classes
1.	Development of entrepreneurship, motivational factors, social factors, environmental factors, characteristics of entrepreneurs, entrepreneurial attributes/competencies.	2

S. No.	Topic	No. of classes
2.	Concept, need and importance of entrepreneurial development. Evolution of entrepreneurship, objectives of entrepreneurial activities, types of entrepreneurs, functions of entrepreneurs, importance of entrepreneurial development, and process of entrepreneurship development.	4
3.	Environment scanning and opportunity identification need for scanning–spotting of opportunity-scanning of environment– identification of product / service – starting a project; factors influencing sensing the opportunities.	2
4.	Infrastructure and support systems- Good policies, schemes for entrepreneurship development; role of financial institutions, and other agencies in entrepreneurship development.	3
5.	Steps involved in functioning of an enterprise. Selection of the product / services, selection of form of ownership; registration, selection of site, capital sources, acquisition of manufacturing know how, packaging and distribution.	4
6.	Planning of an enterprise, project identification, selection and formulation of project; project report preparation, Enterprise Management.	3
7.	Production management – product, levels of products, product mix, quality control, cost of production, production controls, Material management. Production management – raw material costing, inventory control. Personal management – manpower planning, labour turn over, wages / salaries.	4
8.	Financial management /accounting – funds, fixed capital and working capital, costing and pricing, long term planning and short term planning, book keeping, journal, ledger, subsidiary books, annual financial statement, taxation.	4
9.	Marketing management- market, types, marketing assistance, market strategies.	3
10.	Crisis management- raw material, production, leadership, market, finance, natural etc.	3
	Total	32

Practical

S. No.	Topic	No. of classes
1.	Visit to small scale industries	3
2.	Interaction with successful entrepreneurs	4
3.	Visit to financial institutions and support agencies	3
4.	Preparation of project proposal for funding by different agencies	6
	Total	16

Suggested Readings

1. Bhawal, C. P. 2005. Entrepreneurship and Entrepreneurial Development. New Royal Company, Lucknow
2. Vasant Desai. (2011). Entrepreneurial Development Potential beyond Boundaries; Himalaya Publishing House.

Objectives

1. To develop knowledge about concept, objectives and principles of programme planning.
2. To develop ability in planning, implementing and evaluating extension programme.
3. To understand the role of monitoring and evaluation in programme development.

Theory

S. No.	Topic	No. of classes
1.	Planning – concept, importance & nature	1
2.	Extension programme planning- concept, objectives & principles	2
3.	Relevant terms used in programme planning – situation, aims, objectives, problems, solution, project, plans, plans of work, calendar of work	1
4.	PRA – concept, importance & techniques	1
5.	Step in extension programme planning	2
6.	Involvement of local leaders, organisation and extension agencies in planning & implementation of extension programme	2
7.	Implementation of programme- environment & rapport building	2
8.	Constraints in implementation of extension programme & ways to overcome them	2
9.	Monitoring of extension programme - meaning, importance & techniques	1
10.	Evaluation of extension programme- meaning, importance, types & methods	2
	Total	16

Practical

S. No.	Topic	No. of classes
1.	Establishing rapport with rural families and identification of leader	4
2.	Conducting baseline survey of village and household and analysis of information	4
3.	Different PRA tools, its applications in programme development and exercises	4
4.	Triangulation of information from conventional and PRA method	2
5.	Preparation of detailed plan of work for small need based programme	5
6.	Implementation of programme	6
	Evaluation of programme	3
	Documentation and presentation of findings of programme	4
	Total	32

Suggested readings

1. Dhama, O. P. and Bhatnagar, O.P. 1980. Communication for Development Oxford and IBH, Publishing Co., New Delhi.
2. Reddy, A. 1993. Extension Education, Sri Laxmi Press, Bapatla, Guntur, A.P.
3. Sandhu, A.S. 1994. Extension programme planning, Oxford and IBH, Publishing Company Pvt. Ltd., New Delhi, Bombay, Calcutta.
4. Ray, G.L. (2004), Extension Communication and Management. New Delhi : Kalyani Publishers.

Objective

1. To develop understanding regarding project management and its techniques.
2. To develop skill in planning a project proposal.

Theory

S. No.	Topic	No. of classes
1.	Project – Concept, Types	2
2.	Project Management – Concept and elements	3
3.	Formulation of Project Proposal, project initiation, resource allocation frame work, market & demand analysis, Environmental appraisal of projects, Environmental impact analysis, Technical analysis, Financial analysis, budgeting	6
4.	Project management techniques- PERT, CPM and WBS	5
	Total	16

Practical

S. No.	Topic	No. of classes
1.	Visit to following types of projects and preparing case studies on selected projects <ul style="list-style-type: none"> • Technology generation project • Transfer of Technology (ToT) project • Women entrepreneurship project • International funded project • Women and child development project • Agriculture development project, • Rural development project 	1 1 1 1 1 1 1
2,	Visit to state level funding agencies	4
3.	Preparing reports of the projects visited and presentation	7
4.	Preparation of a short term project proposal	7
5.	Working on project management techniques: PERT, CPM, WBS	7
	Total	32

Suggested readings

1. Goel B B.. 2008 . Project Management- Principles & Techniques. Deep & Deep Publications Pvt. Ltd. New Delhi.
2. Agarwal M. R. 2010. Project Management. Garima Publications, Jaipur (Raj.)

Objectives

1. To develop understanding about training.
2. To develop skills in use of different training methods.
3. To develop competence in designing, implementation & evaluation of training programme.

Theory

S. No.	Topic	No. of classes
1.	Training - concept & importance	1
2.	Types of training	1
3.	Phases of training and its management	1
4.	Qualities of trainer	1
5.	Characteristics of adult learning	1
6.	Principles of adult learning	1
7.	Facilitation skills in training	1
8.	Identification of training needs	1
9.	Steps of designing training programme	2
10.	Training methods - Lecturette, demonstration, case study, role play, games, practice clinics, small group task.	3
11.	Training evaluation – meaning, importance, indicators & methods	1
12.	Problems in training	1
13.	Important training institutions in India for extension functionaries and farmers	1
	Total	16

Practical

S. No.	Topic	No. of classes
1.	Visit to training institutes	3
2.	Hands on experience on training methods –Lecturette, demonstration, case study, role play and games	6
3.	Hands on experience with training need analysis	2
4.	Formulation of training objectives	1
5.	Familiarization with monitoring and evaluation tools of training	2
6.	Familiarization with offline and online training module	1
7.	Preparation of training module	2
8.	Planning of a training programme	5
9.	Execution and evaluation of training programme	5
10.	Preparation and presentation of report	2
11.	Analysis of HRD programmes of academic and corporate institutions. Interaction with HRD professionals.	3
	Total	32

Suggested readings

1. Singh, R. P. 2000. Management of Training Programmes. Anmol Publications Pvt. Ltd. New Delhi - 110002 (India).
2. Lynton R. & Pareek U. 1991. Training for development, Vistar Publ., New Delhi
3. Singh R. P. Jhamtani A. and Singh P. 1996. Training Management- A hand book, Jain brothers,16/873, East Park road, Karol Bagh, New Delhi.

EECM 323

Extension Training Management

3(1+2)

Objectives

1. To develop understanding about training.
2. To develop skills in use of different training methods.
3. To develop competence in designing, implementation & evaluation of training programme.

Theory

S. No.	Topic	No. of classes
1.	Training - concept & importance	1
2.	Types of training	1
3.	Phases of training and its management	1
4.	Qualities of trainer	1
5.	Characteristics of adult learning	1
6.	Principles of adult learning	1
7.	Facilitation skills in training	1
8.	Identification of training needs	1
9.	Steps of designing training programme	2
10.	Training methods - Lecturette, demonstration, case study, role play, games, practice clinics, small group task.	3
11.	Training evaluation – meaning, importance, indicators & methods	1
12.	Problems in training	1
13.	Important training institutions in India for extension functionaries and farmers	1
	Total	16

Practical

S. No.	Topic	No. of classes
1.	Visit to training institutes	3
2.	Hands on experience on training methods –Lecturette, demonstration, case study, role play and games	6
3.	Hands on experience with training need analysis	2
4.	Formulation of training objectives	1

S. No.	Topic	No. of classes
5.	Familiarization with monitoring and evaluation tools of training	2
6.	Familiarization with offline and online training module	1
7.	Preparation of training module	2
8.	Planning of a training programme	5
9.	Execution and evaluation of training programme	5
10.	Preparation and presentation of report	2
11.	Analysis of HRD programmes of academic and corporate institutions. Interaction with HRD professionals.	3
	Total	32

Suggested readings

4. Singh, R. P. 2000. Management of Training Programmes. Anmol Publications Pvt. Ltd. New Delhi - 110002 (India).
5. Lynton R. & Pareek U. 1991. Training for development, Vistar Publ., New Delhi
6. Singh R. P. Jhamtani A. and Singh P. 1996. Training Management- A hand book, Jain brothers, 16/873, East Park road, Karol Bagh, New Delhi.

TAD 321

Traditional Textiles and Costumes of India

3 (2+1)

Objectives

1. To gain knowledge of the traditional textiles prevalent in India.
2. To study about the various embroideries of India.

Theory

S. No.	Topic	No. of Classes
1	Traditional woven textiles of India	1
2	History of woven textiles: Dacca muslin, Brocades, Calico Printing	2
3	Traditional sarees of India Jamdani, Baluchari, Pochampalli, Patola and Ikat, Kanjivaram, Chanderi, Maheshwari, Bomkai, Sambhalpuri, Vichitrapuri, Paithani, Kota Doria, Gadwal, Ikkal, Venkatagiri, Narayanpet, Kasavu, Tancoi and Brocade Sarees.	3
4	Traditional woven and embroidered shawls of India: <ul style="list-style-type: none"> • Shawls of Kashmir, • Himachal Pradesh, • Gujarat, • North Eastern States and other states 	1 1 1 1
5	Printed and painted textiles Printed textiles Block printed textiles: <ul style="list-style-type: none"> • Dabu printing, • Bagru printing & Sangane printing, • Bagh printing • Tie and dyed textiles of Rajasthan and Gujarat 	1 1 1 1

S. No.	Topic	No. of Classes
6	Painted textiles: <ul style="list-style-type: none"> • Kalamkari, • Madhubani, • Warli, • Patchitra, • Phad and Pichhawai. 	1 1 1 1 1
7	Embroideries of different states of India: <ul style="list-style-type: none"> • Kashida of Kashmir, • Chamba Rumal, • Chikankari and Zari work of Uttar Pradesh, • Phulkari and Bagh of Punjab, • Embroideries of Gujarat, • Kantha of Bengal, • Manipuri Embroidery, • Kasuti of Karnataka, • Embroidery and Rabari work of Bihar, • Pipli work of Orissa 	1 1 1 1 1 1 1 1 1 1
8	Importance of traditional textiles in textile and apparel industry	1
9	Importance and market scenario of traditional Indian textiles and their impact on modern textiles industry	1
10	Geographical Indications obtained for traditional Indian textiles	1
Total		32

Practical

S.No.	Topic	No. of Classes
1	Documentation of motifs of traditional Indian embroideries	2
2	Sample preparation of traditional Indian embroideries	7
3	Documentation of woven textiles of India.	3
4	Creative projects in the adaptation of traditional motifs and designs in contemporary textiles through collection of samples, sketches and development of scrap book	3
5	Visit to museum and art galleries	1
Total		16

Suggested Readings

- Bhatnagar, P. 2005. Decorative Design History in Indian Textiles and Costumes. Chandigarh, Abhishek Publication.
- Chattopadhyay, K. 1977. Indian Embroidery. New Delhi, Wiley Eastern Limited
- Harney, J. 1997. Traditional Textiles of Central Asia. London. Thames and Hudson Ltd.
- Krishna, R A. 1966. Banaras Brocades. New Delhi. Crafts museum.
- Lubell, C. 1976. Textile Collection of the World. Vol. 2. London. United States publication.
- Mehta, R J. 1970. Master Piece of Indian Textiles. D. B. Taraporevale Sons and Co. Private Ltd.
- Treasure of Indian Textiles. 1980. Calico Museum. Ahmedabad. Marg Publication Bombay.