

SYLLABUS

MASTER OF SCIENCE (M. Sc.)

in

HOME SCIENCE







(CHOICE BASED CREDIT SYSTEM)

2022-24

MAPPING OF

COURSES WITH LOCAL, NATIONAL, REGIONAL AND GLOBAL NEEDS

Mapping Colour Index:

	-	Local
	-	National
	-	Regional
	-	Global
	-	Local, National
	-	National, Regional, Global

COURSE STRUCTURE

Semester-I								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid-Sem.	End-Sem.	Total
1	Hard Core P-1	HC-101	Advanced Food Science and Nutrition	5	5	30	70	100
2	Hard Core P-2	HC-102	Human Development	5	5	30	70	100
3	Hard Core P-3	HC-103	Extension Education	5	5	30	70	100
4	Hard Core P-4	HC-104	Integrated Practical	--	5	30	70	100
5	Allied Core	AC-101	Computer Application For Teaching and Learning	3	3	15	35	50
Total					23	135	315	450

Semester-II								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid-Sem.	End-Sem.	Total
6	Hard Core P-5	HC-201	Resource Management	5	5	30	70	100
7	Hard Core P-6	HC-202	Textile and Clothing	5	5	30	70	100
8	Hard Core P-7	HC-203	Research Methodology and Statistics	5	5	30	70	100
9	Hard Core P-8	HC-204	Integrated Practical	--	5	30	70	100
10	Core Elective	CE-201	A) Advanced Human Development OR B) Rural Development OR C) Nutrition through Life Span OR D) Housing and Interiors OR E) Advanced Textile Processing	5	5	30	70	100
11	Open Elective	OE-201	MOOCs (From SWAYAM/ NPTEL etc.) OR Nutrition Across Life Cycle	--	4	--	50	50

	Total				29	150	400	550
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Semester-III								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid-Sem.	End-Sem.	Total
12	Hard Core P-9	HC-301	Family Sociology	5	5	30	70	100
13	Hard Core P-10	HC-302	Guidance and Counselling	5	5	30	70	100
14	Hard Core P-11	HC-303	Integrated Practical	--	5	30	70	100
15	Core Elective	CE-301	(A) Early Childhood Care and Education OR (B) Community Development and Project Management OR (C) Nutritional Biochemistry OR D) Enterprise Management OR E) Textiles Economics and Marketing	5	5	30	70	100
16	Core Elective	CE-302	(A) Exceptional Children OR B) Communication in Extension Education OR C) Food Microbiology & Food Safety	5	5	30	70	100

			OR D) Ergonomics OR E) Clothing Standards and Specifications					
17	Field Internship	FI-301	Project cum Internship	--	3	--	50	50
	Total				28	150	400	550

Semester-IV								
Sl. No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid-Sem.	End-Sem.	Total
18	Hard Core P-12	HC-401	Community Health Management	5	5	30	70	100
19	Hard Core P-13	HC-402	Practical (Community Health Management)	--	5	30	70	100
20	Hard Core P-14	HC-403	Dissertation	--	5	--	100	100
21	Core Elective	CE-401	(A) Parenting Across the Life Span OR B) Entrepreneurship Development OR C) Therapeutic Nutrition . OR D) Family Finance and Consumer Behaviour OR E) Textiles Management	5	5	30	70	100
22	Allied Core	AC-401	Theory: 'Women and Society' (For All PG Subjects/Programs)	3	3	15	35	50
	Total				23	105	345	450

HOME SCIENCE

- Total number of Semesters – Four
- Each Semester Period: 16 -18 weeks
- Each paper comprises of – 05 Credit points (Excluding open Elective)
- 1 credit-10 teaching hours.
- Each paper comprises of – 100 Marks
- **Hard Core paper**– Main discipline (Mandatory with no choice)
- **Core Elective (specialization): Five (05)**
 - (a) Human development & Family Studies
 - (b) Extension Education & Communication
 - (c) Foods & Nutrition
 - (d) Family Resource Management
 - (e) Textiles & Clothing

Hard Core Papers (HC) – 14 (Spread over all four Semesters) 14x 5=70 credit points

Core Elective Papers (CE) -04(Subject specific/ special/advanced course with choice
Departmentally) 4x5=20 credit points

Allied Core Papers (AC) – 02 (course offered by the department for same or allied
discipline within the same school) 3x2=06 credit points

Open Elective Papers (OE) – 1 Open to students of all P. G Departments (2nd semester)
3 x1=03 credit points

Field Internship(FI)- 01(3rd semester) 3X1=03

- Total papers covered within the Department – 19
- Papers credited from another Department - 03
- Total Number of Papers – 22
- Total Number of Credits – **103 Credit points**
- Total Marks – **2000**

SEMESTER-I
Hard Core Paper –1
Advance Food Science and Nutrition
100 marks, Credits-5: Lectures: 50 hours
Mid Sem (1Hrs) 30+ End Sem (3Hrs) 70 marks
I class =1 hour

Learning Objectives:

- To acquire knowledge on science of food ,nutrients and their requirements for human health
- To gain knowledge on food preparation, food deterioration and new trends of food.
- To understand scientific approaches of RDA and BMR.

Learning Outcomes :

A successful completion of this course will enable students to-

- understand both fundamental and applied aspects of Food Science and nutrition.
- explain functions of specific nutrients in maintaining health.
- interpret and apply nutritional concepts to evaluate and improve the health of the individuals.

Unit – I

Food science:

- Basic food groups, Five basic food groups, Seven basic food groups , Eleven basic food groups and their contribution to health.
- Food preparation: Cooking-objectives, preliminary preparation & methods of cooking, microwave cooking & changes in nutrient during cooking. Selection and storage of food. Food deterioration.
- Meal planning: objectives, factors affecting meal planning, Food additives, Food adulteration.

I Unit-II:

Study of different foods & food products:

- Study of cereals & cereal products, pulses, Fruits& Vegetables, Nut& oils seeds, Milk and milk products and their nutritional contribution.
- Study of Eggs, Meat, Poultry, Fish and other Flesh products, Fats &oils , Sugar & Confectionary, Condiments and spices and their nutritional contribution.
- Food fortification, Functional foods, Antioxidants, New trends in food

Unit – III

Macronutrients:

- Carbohydrates – Classification, Functions, Sources, Requirements, Deficiencies, Digestion, Absorption,
- Proteins – Classification, Functions, Sources, Requirements, Deficiencies, Digestion, Absorption,
- Fats- Classification, Functions, Sources, Requirements, Deficiency, Digestion. Absorption, .

Unit – IV

Micronutrients:

- Functions, sources, requirements of water-soluble vitamins C and B complex (thiamine, riboflavin, niacin, cyanocobalamin and folic acid) and effect of their deficiency.
- Functions, sources, requirements of fat-soluble vitamins A, D, E, K and effect of their deficiency.
- Functions, sources, requirements of minerals: Calcium, phosphorus Iodine, sodium, iron, zinc and effect of their deficiency. Importance of water and roughages, recommended dietary allowances, sources.

Unit - V

RDA and Balanced Diet

- Recommended dietary allowances, Factors affecting RDA, Principles of deriving RDA, RDA & balanced diet for various age groups.
- Basal Metabolic Rate (BMR): Measurement of Basal Metabolism-Direct calorimetry and Indirect calorimetry, Resting energy expenditure, Factors affecting Basal metabolic Rate,.
- Changing trends in life style patterns in population groups.

Books for References:

- Davidson S.R.Passmore, J.F.Brock and A Travsw ill Human nutrition and Dietitics, English language book society and Churchillivingstone 1975.
- N.Shakuntala many anaM.Shadaksharaswamy, New age International publication Food facts and principles.
- Robinson C.H : Normal and Therapeutic Nutrition memillan and Co.
- SuklaP.K: Nutritional problems of India, Prentice Hall of India.
- F.D.Antia :clinical Nutrition and Dietetics, Oxford University Press.
- Swaminathan M:.principles of Nutrition and Dietetics, Bappcs, BangaloreVol-I and II.
- Park & Park: Textbook of preventive and social medicines.
- Begum Rehana:A textbook of foods Nutrition and Dietetics, sterling publications Pvt Ltd.

- Mathur: Guidance for planning Normal and Therapeutic diet.
- Subhangini A Joshi, Tata – McGraw- Hill publishing Company Ltd New Delhi. Nutrition and Dietics :
- Dietetics -B Srilakshmi New age International (P) limited publisher.
- M.S.Bamji, N.P Rao and V.Reddy-oxford and IBH publishing Co.PVT.LTD Text Book of Human Nutrition

Hard Core:Paper-2
Human Development
100 marks, Credits-5: lecture: 50 hours
Mid Sem (1hrs) 30+End Sem(3Hrs)70 marks
1class=1hour

Learning Objectives:

- Develop an understanding about the need and importance of studying human growth and development across life span.
- Learn about the biological and environmental factors that affect human development.
- Understand the different theoretical frameworks fundamentals to human development.

Learning Outcomes:

A successful completion of this course will enable students to-

- Understand the need and importance of studying human growth and development across life span
- Identify the biological and environmental factors affecting human development.
- Describe the characteristics, needs and developmental tasks of different stages in the human life cycle.

Unit – I: Principles and Theories of Human Development

- Human Development – Meaning, process and Principles of human development.
- Stages in Human Life Cycle – Neonate, Infancy, Early and Late Childhood, Adolescence, Adulthood and Old Age - Its characteristics and importance.
- Theories of Human Development - Cognitive Development of Jean Piaget, Psychoanalytic theory of Sigmund Freud, Psycho-social theory of Eric Erickson.

Unit-II: Biological Basis of Development

- How Life Begins: Importance of Fertilization.
- Role of Genes & Chromosomes - The mechanism of hereditary transmission and Sex determination; Genetic & chromosomal abnormalities or disorders. Role of Nature (hereditary) & Nurture (environment) in the growth and development of children.
- Prenatal growth and Development - Stages of Prenatal Growth and Development; Factors influencing prenatal growth and development. Birth process and complications.

Unit – III: Development during Infancy and Early Childhood Years

- Infancy – Physical, motor, social, emotional, cognitive and speech development.
- Early Childhood Years – Physical, motor, social emotional, cognitive and speech development
- Developmental tasks – Meaning, significance and developmental tasks during infancy and early childhood years.

Unit – IV: Development during Late Childhood and Adolescence

- Late Childhood Years - Physical, speech, emotional, social, intellectual, moral development
- Adolescence – Physical, emotional and social changes; interests, family relationships during adolescence. Adolescence problems - alcoholism and Drug abuse, Juvenile delinquency, depression, suicide, eating disorders.
- Developmental tasks during late childhood and adolescent years and its significance.

Unit – V: Adulthood and Old age

- Early and Middle Adulthood –Changes in interest, social mobility, sex-role adjustments during early adulthood. Adjustment to physical and mental changes Adjustment to changed interests, social adjustments during middle adulthood. Problems associated with early and middle adulthood.
- Old Age –Adjustment to physical changes, mental health issues (Alzheimer's disease, Dementia) and other problems associated with this stage.
- Developmental tasks and its significance during adulthood and old age

Books for References:

- Developmental Psychology: A Life-Span Approach - Elizabeth B. Hurlock, Tata McGraw-Hill.
- & Family Studies.NY: Routledge
- Singh, A. (2015) – Foundations of Human Development: A Life Span Approach: ND: Oriens Black Swan
- John Conger - An Adolescence: Generation under pressure -A life cycle book.
- A Text Book of Child behaviour and Development by B. Kuppswamy, Vikas
- Santrock, J. (2017) – A Topical Approach to Life Span Development. NY: McGraw-Hill Higher Education.
- Text book of Child development –R. D. Devdas and Jaya, Macmillan.
- Adolescent psychology-S. P. Chaube Vikas Publishing House.
- Child Development-L.E.Berk
- Text book on Child development and Family Relationship - Aparajita Chowdhury, Academic Excellence, New Delhi.
- Walsh, Deflorio, Burnham & Weiser (2017) – Introduction to Human Development.

Hard Core: Paper -3
Extension Education
100 marks,Credits-5: Lectures: 50 hours
Mid Sem(1Hr) 30+ End Sem (3Hrs) 70 marks
I class =1 hour

Learning Objectives:

- To enable the student to understand the broad concept of Extension Education.
- To enrich the knowledge of the students about teaching and learning process and Extension Programme Planning.

Learning Outcomes

- To familiarize the students with various Home Science programmes and to avail thereof.
- Students will understand the conceptual frame work of Extension Education's

Learning Outcome:

A successful completion of this course will enable students to-

- Understand various community development programmes
- Design and Evaluate developmental extension programmes

Unit I

- Extension Education: Concept, need, scope and objectives.
- Philosophy of extension, principles of extension work.
- Conceptual framework of extension education: Extension as education, extension as communication intervention, extension as persuasion, extension as transfer of technology, emancipatory extension, extension education as a science and discipline, extension as profession.

Unit II

- Programme planning and evaluation: The comprehensive meaning of programme planning in terms of situations, objectives, problems and solution.
- Programme Planning Process / Cycle: Collection of data, analyse situation, identify of problems, decide on objectives, develop plan of work, execute plan, evaluation of progress: importance, by whom, who and when should evaluation be done, reconsideration.
- Evaluation : Types of evaluation(everyday, formal, informal)purpose, benefits, persons involved in evaluation, evaluation in Extension Programme.Principles of extension programme planning, characteristics of a good programme.

Unit III

- Home Science Extension Programmes: Objectives and activities of the following programmes-Integrated Child Development Services Schemes (ICDS).
- Mission Shakti.,BalikaSamridhiYojana (BSY),Krishorii Shakti Yojana (KSY).
- Nutrition Programme for Adolescent Girls (NPAG),Rajiv Gandhi National Scheme for the Children of Working Mothers,One Stop Center(Sakhi).

Unit IV

- Teaching Learning Process: Defining teaching and learning. Steps in teaching-learning process.
- Criteria for effective teaching, criteria for effective learning, teaching learning situation.
- Principles of learning, Theories of learning: Trial and error learning theory, Learning by conditioning (classical, operant).Laws of learning: Primary Laws (Law of readiness, Law of exercise, Law of effect), Secondary Laws (Law of multiple response, Law of attitude, Law of associative shifting,

Unit V

- Adult Education: Definition of adult learner and adult education, objectives, concept, problems of adult education.
- Characteristics of adult learners, ways to motivate adult learners.
- Principles of adult learning, myth about adult learners.

Books for Reference:

- Extension Education and Communication-V.K.Dubey&IndirBishoi.
- An Introduction to extension education - by S.V.Supe.
- Extension communication and management –by G.L. Ray.
- Extension Techniques for Rural Management by- C. Satapathy&Sarita Mishra.
- Education and communication for development –byO.P.Dahama and O.P. Bhatnagar.
- Extension Education – A. Reddy.

Hard Core :Paper – 4
Integrated Home Science (Practical-1)
100 Marks, Credits-5: Lectures: 50 hours
Mid Sem (1 Hr) 30+ End Sem (3Hrs) 70 marks
1 class-3 hour

Learning Objective –

- To learn the basic menu planning procedures for different stages and special conditions of human life.
- To understand the behavioural pattern and changes in childhood and adolescence.
- To get exposure on field situations, report preparation and presentation.

Learning Outcome-

Students will be enabled to

- Get expertise in Menu Planning for different stages and special conditions of Human life.
- Understand the behavioural pattern and changes associated with child.
- Develop the project proposals for various developmental activities.

UNIT – I: Foods and Nutrition (Marks – 40)

- Plan a day's menu during Preschool, School going (Packed Lunch), Adult Man/Woman Adolescence, Old age of low socio-economic. Calculate nutritive value, prepare and serve the menu
- Plan a menu on Special Condition-Pregnancy / Lactation of low socio-economic groups. Calculate nutritive value, prepare and serve the menu.
- Prepare value added foods using low cost locally available foods and serve (development of innovative dishes)

UNIT – II: Human Development (Marks - 30)

- Observation of five children between age of five to ten in the neighbourhood and give a report on their daily behaviour and activities.
- Study of physical/ social/ emotional/ intellectual, at different ages, using standard measurement tools/instruments, writing interpretative reports for parents, teachers and referral services.
- Case studies/interviewing early and late adolescents on issues – problems, pubertal changes, friendships, career, aspirations, self and social awareness, political awareness, mass media preferences.

UNIT – III: Home Science Extension Education: (Marks – 30)

- Conducting a field visit to the rural development programmes/schemes and the outreach activities in a village. Submit a report.
- Preparation of lesson plans of any two topics on social issues and use of different instructional material for effective delivery.
- Organize and evaluate programmes related to women and children at urban slum/rural area.

Semester- II
Hard Core: Paper—5
Resource Management
100 marks, Credits-5: Lectures: 50 hours
Mid Sem(1Hr) 30+ End Sem (3Hrs) 70 marks
I class =1 hour

Learning Objectives:

- To understand the significance of motivating factors applied in household management
- To develop knowledge about the process of decision making and resources used in family
- To understand the techniques of time & energy management in family

Learning Outcomes:

A successful completion of this course will enable students to-

- understand the concepts related to family resource management
- acquire knowledge on significance of management process in different use of resources
- develop insight in management of human energy as a family resource

Unit-I

Motivating Factors in Management:

- Values, Standards, Goals – Concepts, types and their significance in family resource management
- Decision making in the family: Meaning, steps & types in decision making process, aids in decision making
- Resources: Meaning, types, characteristics and importance of resources in family

Unit- II

Management of Family Resources:

- Time management: - Time demands during different stages of family life cycle
- Techniques/tools for efficient use of time –peak loads, work curves, rest period & leisure time
- Time & Activity plan Factors to be considered in making time and activity plan. steps in making time and activity plan

Unit-III

Energy Management :

- Energy demand during different stages of the life cycle.- Energy costs of household activities
- Energy management technique-Body mechanics, & posture in house work, fatigue-types & causes, rest periods

- Work simplification – meaning & importance, techniques of work simplification

Work simplification applied in home, Mundel's classes of change

Unit-IV

Family Finance Management :

- Concept of Income, Analysis of kinds of income, Guidelines in money income management
- Use of money at different stages of family life cycle. Types -Income and Expenditure account, Ledger & balance sheet.
- Account keeping pattern in households-Importance

Unit-V

Space Management:

- Selection of House, Planning of space in the House: Kitchen Planning - Types of kitchen (one-wall, two-wall, U shape, L shape)
- Work simplification in the kitchen: Kitchen activities & work centres- workspace, washing space, storage space, cooking space. Heights of work surface suitable for an average woman in the Kitchen. Modular Kitchen concept
- Storage: Types & principles of good storage, Guidelines for functional storage

Books for Reference:

- Management in Family Living – Nickel and Dorsey
- Management in Modern Family – Gross and Candler
- Home Management - Arya publication (Educational planning Group) Delhi
- Home Management – Vargese, Ogala and srinivasan
- Home Management for Indian Family – M.K.Mann
- An Introduction to Family Resource Management -PremavathySeetharaman, Sonia Batra, PreetiMehera
- Housing for better family living: Veenagandotra&Sarjoo Patel

Hard Core Paper-6
Textile and Clothing
100 marks , Credits-5: lectures: 50 hours
Mid Sem (1hrs) 30+End Sem(3Hrs)70 marks
1class=1hour

Learning Objectives:

- To enable the students to gain knowledge in basics of textiles.
- Develop understanding of technical terms involved in textiles.
- To know the manufacturing process and properties of different textile fibers.

Learning Outcomes

- Students will be able to understand and define the key textile terms.
- Students will identify the fibers, yarn for its appropriate use.

UNIT-I

Textile Fibres

- Definition of textile fibres and textile related terminologies.
- Sequence of fabric construction, classification of fibres.
- Sources, composition and end users of vegetable (cotton, linen), animal (wool, silk), mineral (asbestos) fibres.
- Sources, composition and end uses of man-made fibres: Cellulosic (rayon, acetate, triacetate), non-cellulosic polymers (nylon, polyester, acrylic), rubber, metallic, mineral (glass, ceramic, graphite) fibres..

UNIT-II

- Study of Textile Fibers: Manufacturing process, physical and chemical properties of cotton, linen.
- Manufacturing process, physical and chemical properties of silk, wool.
- Manufacturing process, physical and chemical properties of Polyester.

UNIT-III

- Yarn Formation: Process involved in the manufacture of yarn from the fibers: Blending, opening and cleaning, carding, Doubling, Combing, Drawing, Roving, Spinning.
- Types of yarn: i) Simple yarns, ii) Novelty yarns or fancy yarns : Grandrelle yarns, spiral yarns, Gimp yarns, curl or loop yarns, , knop or knot yarns, cloud or slub or flake yarns.
- Parts of a loom. Essential weaving operations: Shedding, Picking, Beating up (Battening), Taking up and Letting off.
- Classification of weaves: i) Plain weave and its variations ii) Twill weave and its variations iii) Satin weave and its variations.

UNIT-IV

- Clothing for the Family: Socio-psychological aspects of clothing.
- Factors affecting selection of clothing: Age, season, income, occasion, fashion.
- Clothing for different age groups: infants, children, adolescents, adults.

UNIT-V

- Consumer's problem in Selection of fabrics: Problems of the Indian consumer, suggestions for solving these problems, consumer responsibility.
- Guidelines for suitable selection of fabrics: Women's attire, Children's clothing.
- Guidelines for suitable selection of fabrics: Men's ready-made shirts, Men's suits.

Books for Reference:

- Fiber to fabric – Corbman B.P.
- Fundamentals to Textiles and their care – Dantyagi, S.
- Household Textiles and Laundry work – Deulkar, S.
- Textbook of clothing and Textile – Gupta S, Garg N and Saini R.
- Fabrics and Dress – Rathbone L, Tarpley E.
- Textile Fibers and their use – Hess K.P.
- Textiles – Hollen N and Saddler J.
- Textile Design-*Simon Clarke, (2011)*, Laurence King Publishing Limited,London.

&GauravGarg

Hard Core Paper-7

Research Methodology and Statistics

100 Marks, Credits-5: Lectures: 50 hours

Mid Sem (1Hrs) 30+ End Sem (3Hrs) 70 marks

I class =1 hour

Learning Objectives:

- To have a basic knowledge about research and its methodologies
- To identify and define appropriate research problems
- To organize and conduct research in a more appropriate manner
- To understand various steps in writing a research report.

Learning Outcome:

- Students will understand the interpretation and appropriate reporting requirements for statistical and qualitative data.
- Students will acquire knowledge in the rationale underlying the use of statistics.
- Students will develop expertise when to apply which statistical procedure, common errors when using statistics, and how to get the best analysis out of the data.

Unit – I

Research & Research Design

- Research – Meaning, aims, principles and types of research.
- Methods of social science researches - social survey, case study, experimental methods (merits and demerits).
- Research design – Meaning, need and features of a good design, types of developing a research design.

Unit – II

Sampling Design and Data Collection

- Sampling design – meaning, steps and types of sampling, Characteristics of a good sampling design.
- Data Collection – Types of data collection, Collection of Primary data – Observation method, interview method, questionnaires, schedule (merits and demerits)
- Collection of Secondary data – Caution using secondary data. Selection of appropriate method for data collection.

Unit – III

Data Classification

- Classification of data - Meaning, objectives and characteristics of an ideal classification.
- Types of Classifications – Geographical, Chronological, Qualitative and Quantitative Classification)
- Formation of discrete and continuous frequency distribution.

Unit – IV

Data Tabulation

- Tabulation of data – Meaning, objectives, rules of tabulation, and parts of a table. General types of tables
- Diagrammatical and graphical presentation of data- Significance, characteristics, rules and types of diagrams (Dimensional diagrams, Pictograms, Cartograms,

Graphs and curves).

Unit - V

Interpretation and Report Writing

- Interpretation – Meaning, need, techniques of interpretation and precaution to be taken in doing the Interpretation.
- Report writing – Significance types, steps, layout and types of the research reports.
- Bibliography writing – Meaning, need and types of bibliography writing.
- Measures of central tendency-Mean, median,mode,standard deviation

Books for Reference:

- Research Methodology – C.R.Kothari
- Research Education – J.W.Best and J.V.Kahn
- Methods of Social Survey and Research – S.R.Bajpai
- A Text Book of Research Methodology – A.K.P.C.Swain
- Research Methodology – Methods and Techniques – C.R.Kothari&GauravGarg
- Methodology of Educational Research- Lokeshkoul

Hard Core Paper- 8

Integrated Home Science (Practical -2)

100 Marks, Credits-5

Mid Sem (I Hr) 230+ End Sem (3Hrs) 70 marks

I class =1 hour

UNIT-I: Family Resource Management :(Marks - 30)

- Conducting a departmental activity keeping in view the resource management and the following management process and submit a report of the whole action:
 - Planning
 - Organizing
 - Controlling
 - Evaluation.
- Prepare the layout of different types of Kitchens showing the major activity areas including storage space, working heights of surface area.
- Identify resources in and around a family, their use and benefits accrued: Prepare an Inventory.

UNIT-II: Textile and Clothing: (Marks 30)

- Visit to a Textile Industry or a Weaver Co-operative Centre to gain practical knowledge on manufacturing process of fibre to fabrics. Submit a report.
- Printing of fabrics using: Direct style - block, stencil
- Documentation of traditional and modified textile designs and development of textile design library.

UNIT-III: Research Methodology: (Marks - 20)

- Tracing information from reference sources; Literature survey; Citation techniques/Preparation of bibliography;
- Selection of problem, developing Objective, hypotheses, sampling techniques, developing tools as per the Objective, developing a conceptual framework for the problem, data collection, report writing and presentation.

Core Elective Paper-1(A)
Advanced Human Development
100 marks Credits-5: lectures:50 hours
Mid Sem (1hrs) 30+End Sem(3Hrs)70 marks
1class=1hour

Learning Objective:

- Develop an understanding about the theories of human development.
- To know about the developmental task, adjustments during late adulthood and Middle age years.
- To understand the course of development, changes and adjustment in adulthood and old age

Learning Outcomes:

A successful completion of this course will enable students to-

- Identify developmental needs of varied groups of adults and elderly across contexts.
- Become aware of policy's, provisions for adults and elderly across various contexts.
- Understand the theoretical significance of life span development.

Unit-I: Theories of Human Development:

- Learning theory by B. F. Skinner and Ivan Pavlov with critical analysis of the theories and its applications
- Socio-cultural theory by Lev Vygotsky with critical analysis of theory and its application
- Moral development theory of Kohlberg with critical analysis and applications

Unit-II: Theories of Human Development:

- Attachment theory of Bowlby with critical analysis and its applications
- Language theory of Chomsky with critical analysis and its applications
- Need theory of Abraham Maslow with critical analysis and its applications

Unit-III: Early Adulthood Adjustments:

- Marital and Parenthood Adjustment.
- Assessment of Marital Adjustment and Adjustment to Singlehood.
- Hazards of Vocational and Marital Adjustments during Early Adulthood.
- Success of Adjustment during adulthood.

Unit-IV: Middle Age: Personal and Social Adjustments:

- Adjustment to changed interests and social adjustment
- Personal and social hazards of Middle age
- Adjustment to change in family patterns.
- Adjustment to single hood, Loss of spouse, Approaching Retirement, Social adjustment during middle age.

Unit-V: Old Age:

- Adjustment of physical and Motor Abilities in Old Age, Change in Mental Abilities in Old Age, Alzheimer's disease and Dementia.
- Adjustment to Retirement, change in interest, changes in family life, singlehood, living arrangement, geographic mobility
- Vocational and Family life Hazards to Old age.
- Role of Family, Government and different organizations in the care and welfare of the Elderly. Legal & Welfare Measures for the Elderly.

Book for Reference:

- Developmental Psychology: A Life-span Approach – E. B. Hurlock, Tata McGraw-Hill.
- Child Development and Personality- Mussen, Congere, Kagan
- Child development -E. B. Hurlock
- Life Span Development - Shamrock, Brown, & Bench Mark
- Human Development - Across the Life Span-Dacey and Travers, Brown, & Bench Mark.
- Human Development -Diane E. Papalia, McGraw Hill Publication
- Human Development -Berk.

Core Elective Paper-1(B)

Rural Development

100 marks ,Credits-5: Lectures: 50 hours

Mid Sem(1 Hr) 30+ End Sem(3Hrs) 70 marks

I class =1 hour

Learning Objectives

- To know about the Rural Development Programs.
- To understand the basic Rural Institution & its function.
- To know social profile of rural youth and rural women.

Learning Outcomes :

- Students will be the changing agents for the betterment of the society.
- Students will be empowered and in turn empower the rural mass by availing the facilities offered by extension programs meant for rural development.

Unit I

- Rural sociology: Society, Rural- Urban difference Family: definition with functions, Groups (Primary and secondary, formal and informally involuntary and voluntary), Structure and function of society.
- Socialization: social system, Social stratification, social mobility, social interaction (both positive and negative), social roles, social control, social power.
- Social change (structural, functional, cultural), factors associated with acceptance of change, patterns of change, social system norms.
- Social Institution: Family, religion, government, economy, education.

Unit II

- Basic Rural Institution: Panchayat Raj- meaning of Democratic Decentralization, Gram panchayat, PanchayatSamiti, ZillaParisad, Function of Panchayat raj, scope of planning from below.
- Co- operative society: Primary societies, Central societies, Agricultural non-credit societies, government aids to the society, functions of co-operative society.
- Village schools: activities necessary in a school, reasons responsible for poor condition of village school, suggestions to make a village school an effective institution.

Unit III

Rural Development Programmes :

- Pradhan Mantri Gramya SadakYojana (PMGSY)
- Deen Dayal Upadhyay Gramin KausalYojana (DDYGKY)
- National Rural Health Mission (NRHM)
- Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
- Pradhan MantriAwasYojana (PMAY)
- Swach Bharat Mission
- SanshadAdarsha Gram Yojana
- P.M. UjalaYojala
- SamagraSikshyaAbhijan (SSA)
- District Rural Development Program (DRDP)

Unit IV

- Rural youth: Social profile of youth, Basic needs of young people, National Youth Council, Goals of Indian youth programme .

- Youth service schemes: National Service Scheme, Nehru Yuva Kendra (Nehru Youth Center) , Training of Rural Youth for Self- Employment .
- Rural Youth Clubs: Objectives of rural youth club, steps to organize a youth club, extension programme for rural youth.

Unit V

- Rural Women: classification of farm women basing on their role, Role of women in agriculture, Developing technologies for farm women. National Research Centre for women in Agriculture.
- Building extension contact with farm women, Para professional aides, Female disadvantage, the social context of human fertility, Nutrition education.
- Empowerment of rural women: The economic perspective, Strategies for empowerment of rural women , Role of panchayats in developing rural women, Self Help Group.

Books for Reference:

- An Introduction to extension education - by S.V.Supe.
- Extension communication and management –by G.L. Ray.
- Extension Techniques for Rural Management by- C.Satapathy&Sabita Mishra.
- Education and communication for development –by O.P.Dahama and O.P. Bhatnagar.
- Extension Education – A. Reddy

Core Elective P – 1(C)
Nutrition through Life Span
100 marks Credits-5: Lectures: 650 hours
Mid Sem (1Hrs) 30+ End Sem (3Hrs) 70
I class =1 hour

Learning Objectives:

- To study the growth and development during various stages of life
- To understand the basics for recommending the dietary allowances
- To study nutritional needs at different stages of life

Learning Outcome:

- Students will design food plans and assess the adequacy of diets to meet the nutritional needs of humans at various stages of life cycle.
- They will assess nutrition issues and conditions and also recommend nutrition intervention and support to promote the health and wellbeing.

Unit- I

- **Nutrition during Pregnancy**

Physiological Changes ,Nutritional requirements, food requirements, complication during pregnancy

- **Nutrition during Lactation**

Hormones involved in Lactation, Nutritional requirements, food requirements

Unit – II

Nutrition in Infancy

- Growth and Development of Infants, Nutritional requirements, food requirements, breast feeding, artificial feeding low birth weight, preterm baby,
- Weaning and Feeding Problems and Complications.

Unit – III

- **Nutrition for Pre-School Children**

Growth and development of preschool children, Nutritional requirements, Food requirements, Nutrition related problem of preschoolers, feeding programmes

- **Nutrition for School Children**

Growth and development of School children, Nutritional requirements, Food requirements, School lunch programmes

Unit – IV

- **Nutrition for Adolescence**

Growth and development of Adolescence, Nutritional requirements, Food requirements , nutritional problems

- **Nutrition for Adult**

Nutritional requirements, Food requirements ,low cost balanced diet

Unit - V.

- **Nutrition during Old Age**

Process of aging , Nutritional requirements, Food requirements, Nutrition related problems of old age, degenerative diseases, exercise and drugs in old age

Books for Reference :

- Mahtab, S, Bamji, Kamala Krishnasamy, Brahmam, G.N.V. (2012)*Text Book of Human Nutrition*, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi.
- Srilakshmi, B. (2013), *Dietetics*, New Age International (P) Ltd., New Delhi.
- SunetraRoday (2017). *Food Science and Nutrition*, Oxford University Press, New Delhi.
- Longvah, T, Ananthan, R, Bhaskarachary, K, Venkaiah, K. (2017). *Indian Food Composition Tables (IFCT)*, Indian Council of Medical Research, National Institute of Nutrition, Hyderabad.
- ShakuntalaManay, Shadaksharaswamy. M (2013) *Foods, Facts and Principles*, New Age International Pvt Ltd Publishers, 2nd Edition) Ltd., New Delhi.
- Swaminathan, M. (2012), *Advanced Textbook on Food and Nutrition*, Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd., Bangalore.

Core Elective Paper-1(D)

Housing and Interiors

100 marks,Credit-5, Lectures: 50 hours

Mid Sem (1Hrs)30+ End Sem (3Hrs) 70 marks

1class= 1 hour

Learning Objectives:

- Recognize the role of housing for national development
- Be aware of the housing problems in India and the measures for alleviating the problems
- Understand and apply the principles of design in housing
- Understand the application of anthropometric measurements in space designing for various activities.
- Apply aesthetics and creative abilities in interiors.
- Analyse, design, and study dwelling plans of different income families.

Learning Outcomes:

A successful completion of this course will enable students to-

- Practice the knowledge gained on selection of site and building principles in real life situation
- Understand space design organization for optimum comfort and functionalism.
- Learn the principles of design and the contributing factors and apply it in various sectors

Unit- I

History of housing:

- History of housing
- Changes in housing needs and standards
- Housing in India as affected by trends in: Establishments of Levels of income per households, Occupation, Family mobility Technological development

Unit- II

Present housing condition in India:

- Present housing condition in India: Rural and urban
- Cost of housing, Availability of building materials, Quality and quantity of available housing
- Housing management problems

Unit- III

Factors affecting housing:

- Factors affecting housing: Social, Cultural, Demographic and Climatic factors
 - Private and public housing: Various housing schemes, Central government programs, Local government programs, Industrial housing
 - Housing standards and housing legislation. Building codes and byelaws, Rent control act,
- Technical aspects of house design with reference to principles of planning.

Unit- IV

Building materials and finishes

- Basic building materials: cement, concrete, steel, iron.
- Basic finishing materials: wood, glass, plastic, acrylic, ceramics, marble, granite,

plaster

- Cost of housing design
- Factors influencing cost: Estimating, costing and cost reduction technique and Sources of financial assistance
- Definition, types and principles of house planning, Study of house plan

Unit-V

Essential services:

- Different types of services: Plumbing, water supply, drainage, electricity and telephone etc.
- Housing research: Methods and techniques
- Agencies for housing research and development

Book for References:

- Ahmed Kasu: Interior Design.
- Ambedkar, V.N. and Modak, N.V. (1971): Town and country Planning and Housing Orient Longman.
- Deshpande, R.S. (1974): Modern ideal homes for India, United Book Corporation.
- Dongarkery, K.S.: Interior decoration in India.
- Graham, L. (1982): Lighting your Home, Wills and Boons Ltd.
- Rangwala, S.C. (1974): Town planning, Charotar Book Stall, Arland..
- Ahmed Kasu: Interior Design.
- Alexander, M.J. : Designing interior environment, Harcourt Brace Havonovich, 1972.
- Ambedkar, V.N. and Modak, N.V. (1971): Town and country Planning and Housing Orient Longman.
- Deshpande, R.S. (1974): Modern ideal homes for India, United Book Corporation.
- Dongarkery, K.S.: Interior decoration in India..
- Graham, L. (1982): Lighting your Home, Wills and Boons Ltd.
- Rangwala, S.C. (1974): Town planning, Charotar Book Stall, Arland.
- Chudley, R. (1985): Construction Technology, Vol. 1-5.

Core Elective Paper-1(E)
Advanced Textile Processing
100 marks ,Credits-5: Lectures: 50 hours
Mid Sem (1Hrs)30+ End Sem (3Hrs) 70 marks
1class= 1 hour
Learning Objectives:

- To gain knowledge on textile processing.
- To understand the concepts of bio-processing and effluent treatment.

Learning outcome:

Students will able to

- Analyze dyed and printed textiles.
- Recommend the dye, printing and finishing of textiles for specific use.

Unit I

- Classification of dyes: Natural and synthetic.
- Dyes used for cellulosic fibres: Azoic, direct, vat, sulphur, reactive.
- Dyes used for protein fibres: Acid, chrome or mordant.
- Dyes used for man-made fibres: Basic, disperse, pigment, fugitive tints.

Unit II

- Application of dyes: Stock, top, yarn (skein, package, warp beam, space) piece dyeing (union and cross).
- Several methods of piece dyeing, beck, jig, pad, cold pad batch, beam, jet, vacuum impregnation, foam, solvent.
- Identifying dyeing defects.

Unit III

- Pre preparation for printing (preparation of printing paste, printing table)
- Methods of printing-Direct, discharge, resist (batik ,tie and dye) block.
- Roller, flat screen, transfer (dry heat, wet heat) printing.
- Minor printing methods- flocking, blotch, jet spray, photo printing, warp printing and air brush printing.

Unit IV

- Preliminary treatment in finishing: singeing or gassing, bleaching, scouring ,desizing.
- Mechanical finishes: Beetling, Brushing and shearing, calendaring, Fulling,Tentering, Decating, Moireing, Embossing, Glazing, Napping, Sanforizing, Schreinerling, Sizing.
- Chemical finishes: Mercerizing, slack-mercerizing, Ammoniating,.

Unit V

- Special finishes: Wrinkle resistant/ Crease-resistant, Water-repellency, Water-proofing, Moth Proofing, milder-Proofing.
- Finishing processes for functional effects: Shape retentive,wash and wear,absorbency, soil or stain repellency, soil release, flame retardant, anti- microbial, U-Vprotection, anti bacterial,slip resistance, anti static,heat reflectant,foam laminating.

Books for Reference:

- Arora. A (2011), Textbook of Dyes, Sonali Publications, NewDelhi.
- Manivasagam, N. (2003) Treatment of Textile Processing Effluents Including Analysis, Sakthi publications, Coimbatore, Tamilnadu,India.
- Arturcavaco Paulo, (2003)Textile Processing with Enzymes, Textile Institute, Wood

Head Publishing Ltd,U.K.

- Deepali Rastogi and Sheetal Chopra (2017), Textile Science, Orient Blackswan Pvt.Ltd.,Hyderabad,India.
- Asim Kumar Roy Choudhury., (2006)Textile Preparation and Dyeing, Science Publishers,USA.
- Burkhard Wulfhorst, Thomas Gries,Dieter Veit., (2006), Textile Technology Hanson Gardner Publications,Germany.

Open Elective Paper-2
Nutrition across Life Cycle
50 marks ,Credits-3: Lectures: 30 hours
Mid Sem (1 Hr) 10+ End Sem(3Hrs) 40 marks
I class =1 hour

Learning Objectives

- To enhance knowledge about the physiological changes in different stages of life
- Students will gain knowledge on nutritional requirements during various stages of the life cycle for maintaining good health.

Learning Outcomes:

- Students will apply knowledge of the science of nutrition to human health.
- Students will assess and compare diet and nutritional requirements relative to age

UNIT-I

Nutrition during Infancy:

- Developmental milestone during infancy.
- Food Requirements - breast feeding
- Artificial feeding
- Nutrition for low-birth-weight infant
- Weaning

UNIT- II

Nutrition during Early childhood

Early childhood (2-6 years):

- Development milestone during early childhood
- Nutritional requirements
- Food Requirement- Dietary Guidelines
- Nutrition related problems

UNIT-III

Nutrition during Adolescence:

- Development milestone during adolescence.
- Nutritional requirements
- Food Requirement- dietary guidelines
- Nutritional problems

UNIT-IV

Nutrition during old age:

- physiological changes during ageing
- Nutritional requirements
- Food Requirement- Dietary Guidelines
- Nutrition related problems of old age
- Nutritional requirement and dietary guidelines in Degenerative diseases (Diabetes , Cancer, Osteoporosis).

Books for Reference

- Nutrition and Dietetics: Subhangini A Joshi, Tata – McGraw- Hill publishing Company Ltd New Delhi
- Text Book of Home Science-PremlataMallick
- Food & Nutrition- Arya Publication Clinical Nutrition & Dietetics: F. P. Antia: oxford University Press.
- A Textbook of Foods, Nutrition and Dietetics, Sterling publications Pvt Ltd- Begum Rahena
- Human Nutrition-B. Srilaxmi, New age publication., Fundamentals of Foods, Nutrition and Diet Therapy- S.R. Mudambi, M.V. Rajagopal, new Age International publisher.

SEMESTER-III

Hard Core: Paper -9

Family Sociology

100 marks, Credits-5: Lectures: 650 hours

Med Sem (1Hr) 30+End Sem (3Hrs) 70 marks

1class= 1 hour

Learning Objectives:

- Understand family theories and perspectives related to interpersonal relationships and family dynamics.
- Understand interpersonal relationships and family dynamics in contemporary Indian society.
- To aware students of the different stages of the family life cycle and problems associated with it.
- To understand about the essence of family relationship, family issues the role of family education in improving family life.

Learning Outcomes:

- Explain the basic components and process involved in interpersonal relationship.
- Formulate strategies for developing positive dynamic in different relationship and managing conflict.
- Understand interpersonal relationship and family dynamics in contemporary India.

Unit – I: Theories of Family and Types of Family:

- Theories of Family - Developmental theory, Conflict theory, Functional – Structural Theory.
- Conceptual Framework for Understanding Family – Family as a social system. Family dynamics, assessment and intervention.
- Contemporary Family types - Nuclear, Joint, Extended, Alternate Families, Single parent, Childless, Female headed and unitary families.

Unit – II: Marriage and Family Life Cycles:

- Marriage: Its impact on different stages of Family Life
- Family life cycles - Meaning, importance Stages and tasks of family life cycle.
- Crisis in different stages of the family life cycle and need for intervention

Unit – III: Changes in family Structure and Contemporary Issues of Family:

- Changes in the structure and functions of Indian family – Causes and consequences for the society.
- Contemporary Issues and Concerns of Family Life - Migration, reduced value in the family system, impact of mass media-TV, internet, Mobile, Increase in the dissolution of marriage, Health hazards- terminal or chronic illness, AIDS, unemployment, family violence, - child abuse, wife-battering, discrimination. Marital conflicts, Divorce, Dowry and Separation.
- Family as Capital –Meaning of Family capital and impact of natural family dissolution on the societal harmony (specially on children and adolescents)

Unit – IV: Elements and Types of Family Relationship

- Family Relationships - Meaning and significance of family relationship in traditional days and in contemporary societies.
- Basic Elements of Family Relations - Family communication, Role performance within family, family interactions, family adaptability, family cohesion, family homeostasis, family boundaries.
- Types of Family Relationships – Couple relationship, Parent-Child Relationship (Fathering & Mothering), Sibling Relationships, In-law Relationships, Relationship with extended family members and Grandparents and grandchildren's Relationships.

Unit – V: Family Welfare Policy, Laws and Programs:

- National Family Policy – Social policies and the family provisions under the Ministry of Women & Child Development, Urban and Rural Development.
- Family Welfare Laws and programs - Marriage and divorce Laws for Hindus, Muslims, succession, inheritance Laws.
- Protective law for women - Dowry, Domestic Violence, Working Women.

Books for references:

- Choudhury, N. and Shukla, S. (2019) – Family, Identity and the Individual in India. In G. Mishra Edited Vol – 2: Individual and Social: Process and Issues. New Delhi: Oxford University Press.

- David K. Carson, Cecyle K Carson, AparajitaChowdhury Edited Vol - Indian family at the Cross Roads. Gyan Publishing House, New Delhi.
- AparajitaChoudhury, David K. Carson Family Life Education in India: Perspective Challenges and Applications(edited Book), Rawat Publication. Jaipur India.
- AparajitaChowdhury - Text Book of Child Development and Family Relationship - Academic Excellence: New Delhi.
- Baral, J.K and A. Chowdhury - Family in transition: Power Development. Northen Book Center, New Delhi.
- Ram Ahuja - Indian Social Syshtem-, Rawat publication. Enhancing the role of the family as a Agency for Social & Economic Development. TISS, Mumba.

Hard Core Paper-10
Guidance and Counseling
100 marks, Credits-5: Lectures: 50 hours
Mid Sem(1Hr)30+End Sem (3Hrs)70 marks
1class= 1 hour

Learning Objectives:

- To understand the concept, theories & techniques of Counseling.
- To gain knowledge about the need of guidance in the educational setting.

Learning Outcomes:

- Student would become integrated personality
- Aware of careers and be self-dependent.
- Adjust in family and society

Unit-1: Counselling:

- Concept of Counselling – Meaning, significances, scope, and principles of Counselling.
- Types and areas of Guidance and Counselling - Difference between Guidance and Counselling, Counselling and Psychotherapy.
- Theories of Counselling – Behavioural, Psychodynamic and Family therapy.

Unit – II: Techniques of Counselling:

- Techniques of Counselling – Directive, non-directive, eclectic, psychodrama, play therapy,
- Behavioural therapy: relaxation training, modelling, positive reinforcement, charting, systematic generalizations of behaviour.
- Types of Counselling – Individual and group Counselling, their need, settings and outcome of the Counselling.

Unit – III: Area of Counselling:

- Role of different Psychometric tests in Counselling – Aptitude, intelligence, personality and tests.
- Areas of Counselling – Marriage Counselling (pre and post marital), Parental Counselling, Counselling to drug addicts.
- Family Counselling – Dual earner families, child maltreatment and child abuse, adolescent depression and problems. Violence in the family. Counselling for the elderly – Significance.

Unit – IV: Guidance services:

- Organization of Guidance Service at Different Levels of Education.
- Education of good Guidance Program, Kinds of Services.
- Role of personnel in Guidance Programme.

Unit-V: Counselling in Educational Setting:

- Counselling the elementary school and high school children, counselling at college, and role of teachers in counselling.
- Vocational Guidance & Counselling – Theories of vocational development.
- Process of vocational counselling. Distinction between vocational guidance and counselling.

Book for reference:

- Counselling and Guidance - S Narayan Rao, Tata Magraw Hill
- ABC Guidance in Education - S. P. Anand, A page seller B B RS
- Guidance and Counselling – SitaramJawal
- Introduction to Guidance - Crow & Crow
- Guidance and Counselling – Bark & B. C. Mukhopadhaya, Manual Sterling publishing
- Guidance & Counselling by – S. K. Kochar
- Principle & Techniques of Guidance-S.S. ChauhanVikash Publishing House
- Counselling and Guidance by - A. K. Naik, APH Publication.

Hard Core : Paper – 11
Integrated Home Science (Practical-1)
100 Marks, Credits-5: Lectures: 50 hours
Mid Sem (1 Hr) 30+ End Sem (3Hrs) 70 marks
1 class-3 hour

Learning Objective –

- To learn the contemporary issues of families
- To understand the basic counselling and guidance procedures for better life

Learning Outcome-

Students will be enabled to

- Get expertise in analysing the contemporary issues in family
- Understand the significance of Counselling and Guidance for better life

UNIT – I: Family Sociology (Marks – 50)

- Prepare a report on the issues of female headed families
- Prepare an analytical report on contemporary issues of families (marital conflict, divorce, single parent)

UNIT – 2: Guidance and Councelling (Marks-50)

- Visit to a familycounselling centre and prepare a report
- Prepare a case study report on counselling centre in an educational set up

Core Elective Paper-2(A)
Early Childhood Care & Education
100 – Marks, Credits -5: Lectures: 50 hours
Mid Sem(1Hr) 30+End Sem(3Hrs)70 marks
1 class =1 hours

Learning Objectives:

- Know the importance of early childhood years and significance of intervention programs for early childhood development.
- Impart knowledge on program planning for young children.
- Familiarize with indigenous (Indian) model of Early Childhood Education and explore the current early childhood research, theoretical trends and issues.
- To Learn about different curriculum models and pedagogical approaches in early childhood education.
- To know about the constitutional & legal provision for child care & development in India.

Learning outcomes:

A successful completion of this course will enable students to-

- Understand the importance of early childhood year and significance of intervention programs for early childhood development.
- Create developmentally appropriate programs for young children.
- Analyze curriculum models and pedagogical approaches in early childhood education.

Unit-I: Early Childhood and Child Rearing Practices

- Early Childhood Years – Significance, of early childhood years; Universal needs and rights of young children; Status of children in India.
- Care of the Young Children – Importance of children’s environment, concept of child rearing practices; Types of child rearing (feeding, weaning, toilet training, disciplinary techniques)

- Impact of child rearing practices on children's personality development. Factors influencing child rearing practices.

Unit-II: Care and Education in Early Childhood

- Care during Early Childhood Years – Importance of Children's environment, nutritional and health care, psychological care, developing creativity among children.
- Early Childhood Education – Meaning, objectives and needs of preschool education.
- Contribution of Philosophers and Educationists towards Preschool Education – John Locke, Pestalozzi, Froebel, Dewey, Rousseau, Montessori.

Unit-III: Pre-School Program Planning and Activities

- Preschool Organizational Setup – building, site location, plans for various types of preschools (urban, rural and tribal areas), space allotment for indoor and outdoor play areas.
- Preschool Programme Planning - principles and planning of curriculum for preschool. Types of planning- daily, weekly, short-term and long term planning.
- Planning Activities for Preschools – Information talk, storytelling, songs and music, dramatization, science experiences, creative activities, field trips, organizing functions and celebrations and parent-teacher meeting.

Unit – IV: Preschool Administration and Home School Relationship

- Records and Registers – significance, types, using and maintaining records.
- Preschool Staff and Personnel – qualification, qualities and selection of personnel.
- Home School Relationship – Importance and way of developing Home School relations.

Unit-V: Techniques of Studying Children

- Child Study – Meaning, Significance, scope of studying Child Development
- Approaches to Child Study – Longitudinal and cross-sectional approach
- Different methods of child study - Case study, observational technique, Structured tests & scales, Self-report methods, projective and other indirect methods.

Book for Reference:

- Agarwal, J. C. (2007) – Early Childhood Care and Education: Principles and Practices. New Delhi: Shipra.
- Canning, N. (2010) – Play and Practice in the Early Years: Foundation Stage. New Delhi: Sage.
- Kaul, V, (2009) – Early Childhood Education Programme. NCERT, New Delhi.
- Preschool Children: Development, Care & Education - Aparajita. Chowdhury, New Age International, LTD, New Delhi.
- A text book of child development - R. P. Devdas & N Jaya.
- Text Book of Child Development & Family Relation -Aparajita. Chowdhury, Academic Excellence, New Delhi.

Core Elective Paper-2(B)

Community Development & Project Management

100 marks Credits-5: Lectures: 50 hours

Mid Sem(I Hr) 30+ End Sem(3Hrs) 70 marks

I class =1 hour

Learning Objectives :

- To acquire knowledge about the role of Home Science in Community Development.
- To understand the processes of administration & supervision in extension Education.
- To know about project management practices.

Learning Outcomes :

- Students will apply the tools and techniques of project planning and implementation
- Students will be able to manage the organisation with smooth coordination process

Unit I

- Community development: Origin, definition, nature of community development, Community Development as a process, as a method, as a programme, as a movement, as a new institution of a government, as an agency of change, other views of Community Development.
- Areas of activities under Community Development, Principles of Community Development.
- Role of Community Development workers, Role of Home science in Community Development / Rural Development: Poverty Alleviation, Health Promotion, Education, Agriculture Production.

Unit II

- Administration and Organization; Meaning, scope and principles of administration organization, concept of organization (formal and informal).
- Units of Organization: Line and staff, varieties of line units (the department with its subdivision, independent regulatory commission, government corporations).
- The hierarchy, the hierarchical principle or scalar principle or process, span of control, technical problems in building an organization.

Unit III

- Coordination: Need for coordination, achieving coordination (automatically, deliberate process).
- Techniques of deliberate coordination.
- Machinery for coordination, important aspects of coordination.

Unit IV

- Project Management: - Definition, purpose, classification, contents of project.
- Phases in Project Management process / life cycle (project initiation, project planning, project execution, project monitoring and controlling, project closing).
- Steps in Project Management: planning organizing, implementing, controlling and evaluating.
- Lay out of a project. Components of a project report.

Unit V

- Evaluation in Extension Education: Meaning, types, purpose, benefits of evaluation, persons involved in evaluation, principles of evaluation.
- Evaluation in extension programme, advantages of evaluation in extension programme.
- Tools and technique of evaluation: Observation sheet, Interview schedules, Rating scale, Check list .

Books for Reference:

- An Introduction to extension education - by S.V.Supe.
- Extension communication and management –by G.L. Ray.
- Extension Techniques for Rural Management by- C.Satapathy&Sarita Mishra.
- Education and communication for development–byO.P.Dahama and O.P. Bhatnagar.
- Extension Education – A. Reddy.

Core Elective Paper-2(C) Nutritional Biochemistry

100 Marks, Credits-5: Lectures: 50 hours
Mid Sem (1Hrs) 30+ End Sem (3Hrs) 70 marks
I class =1 hour

Learning Objectives:

- To know the chemistry about carbohydrates, proteins and fats.
- To know the methods for determination of energy output and BMR.
- To learn the metabolism of macronutrients

Learning Outcome:

Students will be able to describe and discuss critically

- The nature and extent of metabolic demand for nutrients
- Digestion, absorption, excretion and transportation and storage of nutrients
- Mechanisms for the integration of metabolism
- Will get an insight in to interrelationship between various metabolic pathways.

Unit-I: Carbohydrate Metabolism

- Nutritional Importance of Carbohydrates: definition, classification, structure, composition & function.

- Digestion, Absorption, and Metabolism of carbohydrates,
- Blood sugar level & equilibrium.

Unit-II: Protein Metabolism

- Nutritional Importance of Proteins: composition, Function & classification of Protein, Net Protein Utilisation, Biological Value
- Nutritional Importance of Amino acids: composition, Function & classification of amino acids, & their function
- Digestion, absorption transportation and metabolism of Protein (Nitrogen balance, & deamination of protein)

Unit-III: Lipids

- Nutritional Importance of Lipids: definition, importance fatty acids, classifications & types of lipids,
- Importance of lipoprotein, Digestion, absorption,
- Metabolism of lipids.

Unit-IV: Energy Metabolism

- Energy: methods for determination of energy output, Respiratory Quotient, factors affecting respiratory quotient, value of determining respiratory quotient,
- Determination of energy value of food, Resting Energy Expenditure, energy requirement during work, thermic effect of food,
- Measurement of total energy requirement, calculation of energy expenditure of an average man and woman, energy balance and regulation of body weight.

Unit-V: Metabolism of Micro Nutrients

- Nutritional importance of micro nutrients:
- Functions, absorption micro nutrients: ,
- Metabolism of vitamin A, vitamin D, Calcium, Iron, .

Books Recommended:

1. Fundamental of Biochemistry – A.C.Deb, New Central Book agency (P) Ltd, Calcutta).
2. Food, Nutrition & Health- G. Biswal & C.Lenka, Kalyani Publishers, New Delhi.
3. Text Book of Medical Biochemistry –M.N Chaterjee & Rana Shinde, Jaypee Brothers, Medical Publishers (P) Ltd Bangalore.
4. Fundamentals of Biochemistry –J.L.Jain, S.Chand & Company Ltd, Ram Nagar, New Delhi.
5. Human Physiology Vol I – C.C.Chaterjee, Medical Allied agency, Mahatma Gandhi Road, Calcutta.
6. Human Nutrition & Dietetics – Davidson & Passmare
7. Lehninger's Principles of Biochemistry-D.L.Nelson & M.M.Cox, Macmillan Worth Publishers.
8. A manual of Laboratory techniques-Raghuramulu, N. Madhavan Nair and K.KalyanSundaram – NIN, ICMR.
9. Harpers Biochemistry- R.K.Murray, D.K.Granner, P.A. Mayes, V.W.Rodwell-

Mac millan Worth Publishers
10. Text Book of Biochemistry with clinical correlation T.M.Devlin-Wiley Liss inc.

Core Elective Paper-2(D)
Enterprise Management-
100 marks,Credit-5,Lectures: 50 hours
Mid Sem(1Hrs)30+End Sem(3Hrs)70 marks
1class = 1 hour

Learning Objectives:

- To provide conceptual inputs regarding entrepreneurship management.
- To sensitize and motivate the students towards entrepreneurship management.
- To familiarize with the marketing strategies and market research.
- To understand the role of advertising in sales and promotion.
- To provide an understanding of the significance of consumer information.

Learning outcome:

- Students become entrepreneur and develop entrepreneurship competency.
- Students can grab the opportunity from various schemes implemented by Government for entrepreneurship development.

Unit-I

Conceptual Frame work

- Concept, need and process in entrepreneurship development
- Role of enterprise in national and global economy.
- Types of enterprise merits and demerits.

Unit-II

The entrepreneur

- Entrepreneurial motivation – dynamics of motivation,Entrepreneurial Competency: – Concepts
- Developing entrepreneurial competencies - requirement and understanding the Process of entrepreneurship development, self awareness, interpersonal skills,Creativity, assertiveness, achievement,
- Factors affecting entrepreneur's role: education, awareness, culture, social condition, inhabitant.

Unit- III

Launching and organizing an enterprise

- Enterprise selection market assessment, enterprise feasibility study, SWOT analysis.
- Resource mobilization – finance, technology raw material, site and manpower.
- Costing and marketing management and quality control Feedback, monitoring and Evaluation Growth Strategies.

Unit-IV

Enterprise Networking

- Concept and dynamics, Methods, Joint venture, co-ordination and feasibility study.
- Financial Planning :Budgeting – allocation of resources, identifying aspirations, expectations and goals, objectives, disadvantage of budgeting, control in the context of changing economic conditions, Purchase, storage, cost reduction.
- Implementation: Planning a budget for a Restaurant/hostel/Boutique and any selected organization.

Unit-V

Evaluating and controlling market performance

- Sales analysis, Market share and financial analysis.
- Advertising budget and cost of sales promotion, Customer satisfaction index.
- Impact of technology on marketing, Global marketing.

Books for References:

- Meredith, G. G. et al. (1982): Practice of entrepreneurship, ILO, Geneva
- Patel, V. C. (1987): Women Entrepreneurship – Developing New Entrepreneurs, Ahmedabad, EDII.
- Hisrich, R. D. and Petero, M. P. (1995): Entrepreneurship – starting, developing and managing a new enterprise, Richard D., Irwin, INC, USA
- Chandra Prasanna (1993): Financial Management, Theory and Practice, Tata McGraw Hill Publishing, New Delhi
- Kulshreshtha, R. S.: Financial Management, SahityaBhawan, Agra
- Kuchal, S. C. (1982): Financial Management, An Analytical and Conceptual Approach, Chaitnya Publishers, Allahabad
- Barotiya, G. R. & Sharma N. K. (1998): Effective Advertising, Marketing and Sales Management, Managaldeep Publications, Jaipur
- Hawking D. I., Best R. J., Coney K. A. (1983): Consumer Behaviors, Revised Ed., Newman J. W. Motivation Research and Marketing Management, Prentice Hill
- Schiffman G. Leon, auk Lazer Leslie (1992): Consumer Behavior, Prentice Hall of India, New Delhi.
- Alexander, N.S. and Mercourt, B. (1972): Designing Interior Environment, Havanovich Inc.
- Grandjean, E. (1978): Ergonomics of the Home, Taylor and Francis Ltd., London.
- Patel, V. C. (1987): Women Entrepreneurship – Developing New Entrepreneurs, Ahmedabad, EDII.

- Hisrich, R. D. and Brush, C. G. (1986): The women entrepreneurs, D. C. Health and Co., Toronto
- Prophalia et al. (1997): Financial management, function, planning and policy. Kanishka Publishers, New Delhi
- Chandra Prasanna (1993): Financial Management, Theory and Practice, Tata McGraw Hill Publishing, New Delhi
- Kulshreshtha, R. S.: Financial Management, SahityaBhawan, Agra
- Kuchal, S. C. (1982): Financial Management, An Analytical and Conceptual Approach, Chaitnya Publishers, Allahabad
- Reid, H. G.: Consumers and market Appleton century crafts
- Barotiya, G. R. & Sharma N. K. (1998): Effective Advertising, Marketing and Sales Management, Managaldeep Publications, Jaipur
- Dhar, P. K. (1991): India Economy – Its growing dimensions, Kalyan Publishers, New Delhi
- Hawking D. I., Best R. J., Coney K. A. (1983): Consumer Behaviors, Revised Ed., Newman J. W. Motivation Research and Marketing Management, Prentice Hill
- Kotler, Philip, (1983): Marketing Management, Analysis, Planning and Control

Core Elective Paper-2(E)
Textile Economics and Marketing
100 marks ,Credits-5: Lectures: 50 hours
Mid Sem (1 Hr) 30 + End Sem (3Hrs) 70 marks
I class =1 hour

Learning Objectives:

- To understand the importance, significant contribution and bottlenecks of the Indian textile industry.
- To gain knowledge about the organizational structure of Textile Industry and various Textile Associations across the globe.

Learning outcome:

A successful completion of this course will enable students to:

- Explain how various sectors of textile Industry function.
- Develop a promotional plan and forecasting import and export of textile fibers, yarns and fabrics.

Unit I

- An Overview of Indian Textile Industry: History, Evolution and Growth,
- Contributions of Textile Industry in Indian economy.
- Problems, drawbacks of the Industry, National Textile Policy.

Unit II

- Various Sectors of Textile Industry: Overview of the organizational structure, market size, export-import of cotton, Jute, Coir.
- Overview of the organizational structure, market size, export-import of. Silk, Wool, Man-made, Readymade Garments Industry.
- Handloom and its importance, advances made in Technical Textiles in Indian market.

Unit III

- Textile Associations and Organizations across the Globe: WTO, VAT, GATT, Research Associations.
- Technological and Research Associations- SITRA, NITRA, BTRA, AITRA.
- SASMIRA, SIMA, NTC. Allocation and Utilization of Funds.

Unit IV

- Indian Textile Market: Market size, import - export of textiles fibers, yarns and fabrics.
- Market size, import - export of handloom, power loom and readymade garments.
- Various Export promotion councils: functions, mission, its role in the development.

Unit V

- Market Research: Objectives, research design.
- Forecasting- techniques - trend analysis.
- Export procedures and incentives.

Books for Reference:

- Dudeja V. D.(2005) Professional Management of Fashion Industry, Gagandeep Publications, Delhi.
- Nirupama Pundir,(2007) Fashion Technology Today and Tomorrow, Mittal Publications, New Delhi.
- Manmeet Sodhia and Pooja Chatterjee,(2003) Fashion Marketing and Merchandising, Kalyani Publishers, New Delhi, 2003.
- R.Nandagopale et al.,(2004) Textile and clothing management, Allied Publishers Pvt Ltd. Delhi.
- Dorling Kindersley, (2012) Fashion, The Ultimate Book of Costume and Style, Published by Dorling Kindersley Limited; London.
- S.Kasi and P. Balamurugan (2016) , Liberalization and Indian Textile Industry, New Delhi
- Mausumi Kar (2015) The Indian Textile and Clothing Industry-An Economic Analysis, Springer Publications, New Delhi
- Prashant P. Deshpande (2009) Garment Export Industry Of India, APH Publishing New Delhi
- Aparajita Chowdhury, Gyana publishing House ,New Delhi.
- Family life Education in India: Perspectives, Challenges and Applications- edited book by Dr Aparajita Chowdhury David K. Carson, Cecylek . Carson.

Core Elective Paper-3 (A)
Exceptional Children
100 marks, Credits-5: Lectures: 50 hours
Mid Sem(1Hr) 30+End Sem(3Hrs)70 marks
1 class =1 hours

Learning objectives:

- Orient the students about the need and importance of studying children with different disabilities and how needs of these children differ from others.
- Develop an understanding and awareness of the basic terms, issues and concepts related to disability.
- To know about the policies and programmes for the education of exceptional children.

Learning outcomes:

A successful completion of this course will enable students to-

- Understand the need and importance of studying children with different disabilities.
- Identify the common disabilities prevalent in childhood
- Distinguish the education patterns between children with disability and other children.

Unit-I

- Meaning, definitions and classifications of exceptional children.
- Children with Sensory Deficits - Deaf and dumb, visually impaired – definition, causes, teaching methods and rehabilitation.
- Mentally Challenged Children - Definition, causes, classification, education and rehabilitation.

Unit-II

- Socially Handicapped Children (Juvenile delinquents) – Meaning, causes, behavioural symptoms, preventive measures taken, rehabilitation.
- Emotionally Disturbed children - Common behavioural problems of children, Psychosis (Schizophrenia and Autism in children), Neurosis (Phobia, Obsession and compulsion).
- Orthopedically Challenged Children – Definition, causes, treatment and rehabilitation.

Unit-III

- Children with speech defects – Aphasic child, stammering, stuttering, articulatory defects, remedial measures and speech therapy.

- Teaching techniques for improving language mainstreaming and integration - Roles of regular and resource teacher Education provisions for the server cases of language handicap.
- Gifted Children – Definition, Classification, Education methods used, Parental awareness and development competency in bringing up these children.

Unit-IV-Differently abled Children

- Status and Situation of differently abled children and adolescents in India.
- Programmes for foundations for life-long learning. Preventing and arresting developmental delays / disabilities.
- Rights of the differently abled Children and Adolescents.

Unit-V –Welfare programme and Policies

- Welfare programmes and policies for disabled children and adolescents in India.
- Policies, Government provisions, Concessions, Facilities
- Legislations for challenged children.

Books for References:

- Chopra, G. (2012) – Early detection of disabilities and persons with disabilities in the community. New Delhi: Engage Publications.
- Mangal, S. K. (2007) – Exceptional Children: An Introduction to special education. New Delhi: Prentice Hall of India.
- Dhawan, M. (2011) – Education of Children with Special Needs. New Delhi: Isha Books.
- Uday Shankar - Exceptional children. New Delhi: Sterling publishers,
- K C Panda - Exceptional children-
- D. S. Mehata = Hand book of Disabled in India. Mumbai: Allied publisher Pvt. Ltd

Core Elective Paper-3(B)
Communication in Extension Education
100 marks ,Credits-5: Lectures: 50 hours
Mid Sem(I Hr) 30+ End Sem(3Hrs) 70 marks
I class =1 hour

Learning Objectives

- To understand the use of communication in extension education.
- To develop understanding of the use of different methods of communication.

Learning Outcomes

- Student will understand communication process and will be able to communicate effectively for social development.
- Students will understand the importance of feed back in Extension Education.

Unit I

- Communication: definitions and meaning, importance, scope, functions of communication.
- Communication process, Dimension of purpose (The 'WHO' AND 'HOW' of purpose)., Types of communication.
- Factors affecting communication, role of communication in social change or development.

Unit II

- Elements communication.
- Models of communication process: Aristotle's model, Shammom – Weaver model,
- Westley and Machean model, Leagan's model, Berlo's model.

Unit III

- Communication approaches: Individual approach- personal visits (Farm units, home units), personal letters.
- Group approach through: Demonstration (result demonstration, method demonstration), training the leaders, discussion meetings (group discussion, panel discussion, symposium, forum, group interview, dialogue or public conversation, workshops, field days, tours) .
- Mass approach through: Radio, Television, Newspaper, Farm publication, Mass meeting, Campaign, Exhibition.

Unit IV

- Audio-Visual Aids: definition, classification of audio-visual aids, choice of audio-visual aids, advantages of AV aids. Audio Aids in information & communication: Tape recorder, public address system, telephone.
- Visual aids in information & communication: Projected visual Aids:- Opaque projector, slide projector, overhead projector, filmstrip projector.
- Non-Projected visual Aids:- teaching aids (chalk board, hand drawn picture & photograph, flash cards, flannel graph, flipchart), display visuals (charts, posters, hoardings, specimen, model, diorama, map. Audio-Visual aids in information & communication:

Projected Audio- Visual aids: Motion picture (cinema), video.

Non- projected Audio-Visual Aids: Drama, puppet show, talking doll.

Unit V

- Feedback in communication: the feedback process, feedback as resource orientation.
- Role of feedback in extension education.
- Feedback in communication of information, effect of feedback in communication of information.

Books for reference:

- An Introduction to Extension Education - by S.V.Supe.
- Extension communication and management – by G.L. Ray.
- Extension Techniques for Rural Management by- C.Satapathy&Sabita Mishra.
- Education and co mmunication for development –by O.P.Dahama and O.P. Bhatnagar.
- Extension Education – A. Reddy.

Core Elective Paper-3(C)

Food Microbiology & Food Safety

100 marks, Credits-5: Lectures: 50 hours

Mid Sem (1Hrs) 30+ End Sem (3Hrs) 70 marks

I class =1 hour

Learning Objective

- To make the students understand the physio-chemical properties of foods
- To enable the students understand the effect of cooking.
- To learn about food sensitisation and food hygiene

Learning Outcomes:

- Students will evaluate food quality and food safety system. Will gain knowledge on food toxicology and food borne illness.
- Students will learn and evaluate the food adulteration and how to control it.

UNIT I: Overview of Basic Microbiology:

- Definition, Scope of Food Microbiology,
- Important Microorganisms in food microbiology: Bacteria, Fungi, Yeast, Viruses, Factors affecting the growth of microbes.
- Important food borne infections and intoxications due to bacteria, moulds, viruses.

UNIT II: Food Spoilage and Preservation:

- Food spoilage: Definition, sources of contamination and microorganisms involved in spoilages of various foods: Milk, Vegetables and fruits, Meat, Eggs and Fish.
- Physical and chemical means used in destruction of microbes.
- Definition of sterilization and disinfection, role of heat, filtration and radiation in sterilization, use of chemical agents-alcohol, halogens and detergents.

UNIT III: Microorganisms in Human Welfare:

- **Microbial importance**-Importance of microbes in food biotechnology. Genetically engineered organisms, Pre and pro probiotics and single cell proteins.

- **Traditional Indian fermented foods** -Traditional Indian fermented foods and their health benefits. Dairy products (cheese and yoghurt)
- **Food sanitation & Hygiene:** Food contamination, (sources, transmission agents)

UNIT IV: Food safety :

- **Public Health Hazard**-Public health hazards due to microbial contamination of foods.
- **Microbial Hazard**-Salmonella typhi, Helicobacter pylori, Bacillus cereus, Staphylococcus aureus, Clostridium botulinum, Escherichia coli.

- **Toxicological Hazard**- (Mycotoxins, Hepatitis A virus & Rota virus)- Symptoms, mode of transmission and methods of prevention.

UNIT-V: Food Quality and Adulteration

- **Food Quality:** Sensory evaluation of food, objective methods to judge the quality, types, application and limitation of sensory evaluation,
- **Quality Attributes:** Measurement of quality attributes food standards, grading & inspection. . Food adulteration. Common adulterants in food, Control of food quality (codex Alimentarius, Indian standards) , Food laws and standards
- **Quality control:** Quality control of agricultural produce, fruit products, Food products & export, strategy & approaches for quality control, Laws & regulations, voluntary agencies & quality control.

Books Recommended:

1. Food Microbiology – M.R.Adams & M.O.Moss, New Age International (P) Limited, New Delhi.
2. Food Facts and Principles -N. Shakuntala Manay & M. Shadaksharaswamy, New Age International (P) Limited, New Delhi.
3. Food Science – B.Srilakshmi, New Age international (P) Limited, New Delhi.
4. Food Microbiology – William C.Frazier, Tata McGraw Hill publishing Company limited, New Delhi.
5. Food processing and Preservation – G. Subhalakshmi & Shobha A. Udipi, New Age International (P) Limited, New Delhi.
6. Food Hygiene & Sanitation – S.Roday- Tata McGraw Hill, New Delhi.
7. Frazier WC, Westoff DC.(1998)Food Microbiology. 4th ed. Tata McGrawHill Publishing Co. Ltd.
8. Garbutt John (1997) Essentials of Food Microbiology. Arnold London.
9. Jay JM, Loessner DA, Martin J.(2005) Modern Food Microbiology. 7th ed. Springer
10. Prescott LM, Harley JP, Klein DA. (2008) Microbiology. 6th ed. WMC Brown Publishers.

Core Elective Paper-3(D)

Ergonomics

100 marks ,Credits-5: Lectures: 50 hours

Mid Sem (1Hrs) 30+ End Sem (3Hrs) 70 marks

I class =1 hour

Learning Objectives:

- To become aware of the role of ergonomics in work effectiveness and efficiency
- To understand the environmental factors contributing to productivity, safety, control and well-being of individual performing the work

Learning Outcomes:

- The students will be educated on the importance of right postures for designing work place
- The students will learn how to use energy wisely while doing different physical activity

Unit I

Ergonomics

- Scope of ergonomics in home and work place
- Nature of work in household and other occupations
- Interdisciplinary and applied nature of ergonomics

Unit- II

Physiological Aspects of Work

- Types, structure and function of muscles.
- Neuromuscular system, nerve impulse transmission mechanism and types of muscular contraction and energy requirement.
- Cardiovascular circulation on general and emphasis co muscle circulation.

Unit- III

Energy management and factors affecting muscular activity

- Energy expenditure for different activities and energy balance
- Aerobic and anaerobic work - (maximum aerobic power and factors affecting VO₂ max, oxygen debt), Muscular strength-endurance and energy consumption Efficiency, work load and physiological fatigue
- Heart rate (Pulse rate) as measure of body stress, for classification based on Physical parameters, time motion studies - principles of motion economy.

Unit IV

Anthropometry and Biomechanics

- Definition of Anthropometry, Measurements of body dimensions, Static and dynamic anthropometry.
- Work space and work station design for standing and sitting operation, Identification and analysis of posture.
- Effect of wrong postures on cardiovascular and musculoskeletal system - different types of musculoskeletal disorders, Correct techniques of lifting and carrying weight, work load and postures.

Unit-V

Engineering Psychology

- Man-machine system:- Design application of anthropometry , Principles ,of motion economy , Work centres .equipment and tools.

- Behavioural and motivational factors in Engineering Psychology.
- Ergonomic consideration for the physically challenged

Books for References:

- Roebuck, J. A.; Kroemer, K.H.E. and Thomson, W. G. (1975): Engineering Anthropometric Methods. Wiley-Interscience Publication, New York.
- Galer, I. A. R. (1987): Applied Ergonomics Handbook, (c) Butterworth & Co.
- Grandjean, E. (1968): Fitting the Task of the Man; A Textbook of Occupational Ergonomics, Taylor and Francis, London..
- Wells, K. and Luttgens Kathryn (1976): Kinesiology : Scientific Basis of Human Motion 6th edition
- Davis, D. R. and Shackleton, V. J. (1975): Psychology of Work, Motunen& Co Ltd
- Nag, P.K (1996): Ergonomics and Work Design: Emerging Issues in Organizational Science, New age international (P) Ltd. New Delhi
- GrandjeansEttiens (1978): Ergonomics of the Home, Taylor and Francis, London
- Murell, K. F. H. (1965): Ergonomics, Champman Hall, London
- Anshel, Jeffrey (1968): Visual Ergonomics in the Workplace, Taylor and Francis, London
- Crossman, Richard (1995): Ergonomics, Pocket guide, Genium Publications
- Dul, Jan and Weerdmeester Bernard (2001): Ergonomics for Beginners, Taylor & Francis, London
- Ringdahl Lars Harms (2001): Safety Analysis, Taylor and Francis, London
- Jordan, P. W. (2001): Pleasure with Products, Taylor and Francis, London
- Norris, B. and Wilson J. R. (2001): Designing Safety into products, Taylor and Francis, London
- Ergonomics Methodology, Taylor and Francis, London
- Pheasant Stephan (2001): Body Space, Anthropometry, ergonomics and the Design

Core Elective Paper-3(E)
Clothing Standards and Specifications
100 marks ,Credit-6, Lectures: 60 hours
Mid Sem (1Hrs) 20+ End Sem (3Hrs) 80 marks
1class= 1 hour

Learning Objectives:

- To enable the students knowing the standards in quality clothing construction.
- To develop the holistic understanding of clothing standards and specifications.

Learning Outcomes:

- Utilize design component in garment construction.
- Understand care instruction for different fabrics.

Unit-I

- Seam and seam finishes: Plain, French, Run and Fell, Slot.
- Pleats: Knife, Box, Inverted, Permanent stitched, Accordion.
- Fasteners in common use: Buttons, lace, braid, elastic, hook and eyes, velcro, seam binding and tape, eyelets, zip fasteners, buttons, press buttons, snap fasteners

Unit- II

- Sleeves: Plain, Puffed, Dolman, Raglan, Kimono without a gusset, Magyar, Leg- o- mutton.
- Collars: Round, Convertible, Peter-pan, Chinese, Coat.
- Neckline finishes: Binding and facing.
Tucks: Pin, wide, corded, criss - cross.

Unit –III

- Quality Standards: Definition of standard, benefits of standards, levels of standards, need for uniform standards.
- Standardizing bodies: AATCC, ASTM, ANSI, ISO, BSI, BIS.
- Quality assessment of garments: Cutting, sewing, pressing, finishing and packaging defects.

Unit- IV

- Importance of Specifications and its role in maintaining quality.
- Process of specification sheet development.
- Fabric inspection, classification of fabric defects, independent product quality certification.

Unit- V

- Importance of care labels, care symbols and variations in different countries - Japanese, American symbols.
- Meaning, Care instructions for different fabrics and garment types.
- Care labels: Washing, Bleaching, Drying, Ironing and different placements of label in garments.

Books for Reference:

- Pradip Mehta &S.K.Bhardwaj, (2011) Managing quality in apparel industry', New age Publishers.
- Sara J. Kadolph., (2007) Quality Assurance for Textiles and Apparel, Fairchild Publications.
- Alston Smith.,(2009)The Sewing Book, D.KPublishers.
- Claire Shaeffer,(2001)Sewing for Apparel Industry, Prentice HallPublishers.

- www.sewingsolutions.org
- Elliot Brown Grover, Dame Scott Hamby, (2007) Handbook of textile testing and quality control, Textile Book Publishers.

FIELD INTERNSHIP (FI)

Project Work cum Internship

50 Marks, Credits-3

Project Work – 50

Internship – 50

- Project Report - Students will have to prepare a project report on any area of their choice from the special papers in Home Science. The project must be within 30 double spaced typed pages with the following aspects:

- Introduction – 04 pages
- Review of literature – 08 Pages
- Methodology – 04 Pages
- Results & Discussion – 08 Pages
- Major Findings – 02 Pages
- References – 04 Pages

- Internship - Students will be attached to an NGO/Old Age home/

Different centers (health centers/clinics/hospitals/food processing centres/Anganwadi/hostels/hotels/Preschool/Play School/institutions for handicapped children/ Juvenile home/Old age home/destitute homes)/Textile industry or Loom/Garment manufacturing unit/ tailoring unit or shop for two weeks for training and submit the Internship certificate and a report within 10 pages on its Physical set up, education, training, problems faced and rehabilitation or any other aspects with the experienced gain.

HARD CORE –P-12

Community Health Management

100 Marks, Credits-5: Lectures: 50 hours

Med Sem (1Hr) 30+End Sem (3Hrs) 70 marks

1class= 1 hour

Learning Objectives:

- To know the basics of community health management
- To assess the nutritional and health Status of an individual
- To learn nutritional programs and policies to overcome malnutrition
- To understand various national and International nutritional organizations for combating malnutrition

Learning Outcomes:

- This course will enable the students to develop a holistic knowledge base and understanding of the nature of important nutrition related problems and their prevention and control.
- Students will understand the determinant, causes and consequences of nutritional problems in the society.
- Students will be able to assess the nutritional status of the individual and get familiar with various approaches to nutrition and health interventions, different international and national agencies.

Unit – I

Introduction to Public Health

- Meaning and Scope of Public Health Nutrition: Positive Health and the concept of wellbeing, Dimensions of health such as physical, mental, social, spiritual, emotional. Concept of disease, Concept of control and concept of prevention
- Determinants of Health – Biological, behavioral, socio cultural, environmental, socio economical and other factors.
- Indicators of Health –Mortality, morbidity, disability, nutritional status, health care delivery, indicators of social and mental health, environmental, quality of Life, other indicators. Fertility indicators, Human development Index, Reproductive health index

Unit – II

Major Nutritional health Problems

Etiology, prevalence, biochemical and clinical manifestation, preventive and therapeutic measure of :

- Low birth weight
- Protein energy malnutrition,
- Macro and micro nutrient deficiency diseases(VitaminA ,VitaminD, Iron, Iodine, Flourine, zinc, Sodium, Potassium)

Unit – III Major life style related disorders:

Public health implications, etiology, symptoms and preventive strategies for

- Obesity and overweight, Hypertension, coronary heart disease,
- Diabetes, cancer, Polycystic Ovarian Syndrome.
- Kidney diseases, nephorities ,HIV/AIDS

Unit – IV:

Malnutrition and measures to combat malnutrition

- Malnutrition, effect of malnutrition on vulnerable section of society, impact of malnutrition on national development, causes of malnutrition, ecology of malnutrition,
- Measures to combat malnutrition: National nutrition Policy & Programmes, Role of ICDS & national agencies in combating malnutrition (NIN, FNB, NNMB,ICMR,ICAR CFTRI)
- Role of International agencies in combating malnutrition (WHO, FAO, UNICEF, CARE)
- Role of food technology in combating malnutrition (development of food mixtures, food fortification, food preservation).

Unit – V

Assessment of Nutritional Status

Meaning and studying importance of Nutritional Status,

- Direct Nutritional Assessment parameters - anthropometry, biochemical parameters
- Clinical signs , symptoms and dietary assessment
- Indirect Nutritional Assessment parameters – vital statistics, age specific mortality rate, and morbidity

Books for References:

- Park A. (2007), Park's *Textbook of Preventive and Social Medicine* XIX Edition M/S Banarasidas, Bharat Publishers, 1167, Prem Nagar, Jabalpur, 428 001(India)
- Bamji M.S, Prahlada Rao N, Reddy V (2004). *Textbook of Human Nutrition* II Edition, Oxford and PBH Publishing Co. Pvt. Ltd , New Delhi
- Bhatt D.P (2008), *Health Education*, KhelSahitya Kendra, New Delhi
- Gibney MJ, Margetts BM, Kearney JM, Arab L (2004) *Public Health Nutrition* Blackwell Publishing Co. UK
- Swaminathan M (2007), *Essentials of Food and Nutrition. An Advanced Textbook* Vol.I, The Bangalore Printing and Publishing Co. Ltd, Bangalore
- UNICEF. <https://www.unicef.org/>
- WHO. <http://www.who.int/>
- National Guidelines on Infant and Young Child Feeding. wcd.nic.in
- WHO Non-communicable diseases and risk factors. <http://www.who.int/ncds/en/>
- National Nutrition Mission – ICDS. icds-wcd.nic.in
- Ministry of Health & Family Welfare, www.mohfw.nic.in
- Field guide to designing communication strategy, WHO publication-2007
- Communication for Development (C4D) Capability Development Framework, UNICEF and 3D Change, 2009
- Health education: theoretical concepts, effective strategies and core competencies: a foundation document to guide capacity development of health educators/World Health Organization. Regional Office for the Eastern Mediterranean, 2012
- Risk factors. <http://www.who.int/ncds/en/>
- National Nutrition Mission – ICDS. icds-wcd.nic.in
- Ministry of Health & Family Welfare, www.mohfw.nic.in
- Field guide to designing communication strategy, WHO publication-2007
- Communication for Development (C4D) Capability Development Framework, UNICEF and 3D Change, 2009
- Health education: theoretical concepts, effective strategies and core competencies: a foundation document to guide capacity development of health educators/World Health Organization. Regional Office for the Eastern Mediterranean, 2012

HARD CORE: Paper-13
Community Health Management
100 marks , Credits-5: Lectures: 50 hours
Med Sem (1Hr) 30+End Sem (3Hrs) 70 marks
1class= 1 hour

Learning Objective

- To get exposure to Nutrition Management Centres and its functions

Learning Outcome

- Students will gain knowledge and skill on nutritional management.

UNIT-1

- Visit to nearby Nutrition Rehabilitation Centre (NRC) and prepare a report on SAM(Severe Acute Malnutrition) management
- Visit to an Anganwadi centre and study supplementary nutritional management for pre-school children

UNIT-2

To plan, prepare and serve diet for disease conditions

- Diabetes
- Peptic ulcer
- Nephritis
- Atherosclerosis
- Hypertension
- Obesity

HARD CORE: Paper-14
Dissertation
100 marks , Credits-5: Lectures: 50 hours
Med Sem (1Hr) 30+End Sem (3Hrs) 70 marks
1class= 1 hour

Core Elective Paper- 4(A)
Parenting Across the Life Span
Credits-5: Lectures: 50 hours
Mid Semester (I Hr) 30+ End Semester (3Hrs) 70 marks
I class =1 hour

Learning objectives:

- To understand the concept of parenting, parenthood & stages of parenting.
- To know more about parenting roles, types & challenges of parenting.

- To understand the necessity of parent education & support as well as positive parenting.

Learning outcomes:

A successful completion of this course will enable students to-

- Acquire knowledge on healthy and peaceful parenthood.
- Break discord family life.
- Maintain successful life in spite of modern challenges of family.

UNIT-I:

- Parenting and Parenthood - Meaning and significance, foundation of parenthood in Indian Family Life – Traditional and contemporary.
- Stages of Parenthood – Prenatal, infancy, childhood, adolescence, adulthood and old age.
- Grand Parenting – Importance, types, and its advantages both for grandchildren and grandparents.

UNIT-II:

- Parenting Roles – Determinants of parenting Behaviour (family structure, situation, reputation and relationship; ordinal position and gender; experience and exposure to parenting skills, parental expectation, child's inborn abilities and disabilities, temperaments, financial condition, education status and mothers' employment).
- Role of Father and Mother on Child's Life – Fathering and Mothering in Indian socio-cultural settings.
- Parenting Adolescents and Adults – Problems associated with adolescent and adult parenting.

UNIT – III:

- Types of Parenting and its effect on Child Development – Authoritative, authoritarian, permissive and uninvolved parents and its impact on Children's Personality and Behaviour
- Aspects of strengthening parenting practices - Caring for self, acquisition of knowledge, nurturing, guidance, motivation, building harmonious relationships with others.
- Key Issues in Parenting – Building attachment, health and assistance in fulfilling needs, habit formation, learning social roles and interaction with the school and community.

UNIT – IV:

- Challenges of Parenting – Role strain on parents due to dual responsibility, less time and opportunities for self-growth, stress due to work and family balance, disagreement and marital conflict between the spouses, problems during financial scarcity and job insecurities, having a disabled or chronically ill child.

- New age Parenting – Father’s involvement in child development. Type of fathers & their role in child care.
- Impact of Mother’s work participation and Child Development in Indian Social Context.

UNIT – V:

- Parent Education and Support – Issues of Parent education in Indian socio-cultural context. Approach to Parent education in India – School and the community (Anganwadicenters, preschools, elementary school, community groups/centers).
- Positive Parenting – Meaning, key issues involved in positive parenting(harmonious relationship between father and mother, opportunities for children to grow, develop and explore, parent’s own personal characteristics, type of child rearing practices, parental acceptance, support and guidance, parents relationships with others in the community).
- Outcome of effective parenting – Healthy child development in terms of - Physically, mentally, spiritually and socially to compete the future challenges of life.

Books for Reference:

- Indian families at the cross Roads - Edited book David K. Carson, Cecyle K. Carson, AparajitaChowdhury, Gyan Publishing House, New Delhi.
- Family life Education in India: perspectives, Challenges and Applications- edited book by AparajitaChowdhury, David k. Carson, Cecyle K. Carson.
- Parenting - by Jane B. Brook
- Child Development and Family Studies – AparajitaChowdhury, Academic Excellence, New Delhi.

Core Elective Paper- 4(B)
Entrepreneurship Development
100 marks, Credits-5: Lectures: 50 hours
Mid Sem(I Hr) 30+ End Sem(3Hrs) 70 marks
I class =1 hour

Learning Objectives:

- To know about the entrepreneurship development.
- To gain knowledge about information technology.
- To enrich knowledge about capacity Building.

Learning Outcomes

- Students will be able to analyse the problems faced by Women Entrepreneurs and the ways to overcome it.
- Students will know the possible ways to apply information technology for entrepreneurship development.

Unit I

Transfer of Technology and Models of Technology

- Transfer of Technology (TOT): definition, determinants of technology transfer, extension vs. TOT.
- System approach in TOT.
- Models of TOT: conventional model, feedback model, farmer participatory model.

Unit II

Characters of Entrepreneurship and Women Entrepreneur

- Entrepreneurship Development: Entrepreneur, characteristics of entrepreneurs.
- Characteristics of entrepreneurship.
- Women entrepreneurs, problems encountered by women entrepreneurs, associations promoting women as entrepreneurs.

Unit III

Importance of Training in Extension Education

- Capacity building through Training:-Meaning, definition, importance & need of training.
- Educations vs. training, setting training objective, and training need assessment (TNA).
- Principles of extension training, different training methods, problems of training.

Unit IV

Application of IT and E-Governance

- Application of Information Technology: Decision support to public administrators, Improving services to the people, empowering people to access information and knowledge, support to training, opportunities from information technology.
- E-Governance, e-Government applications, computer-based centres, Information communication technology in rural distribution.
- Some computer based communication aids: Cell phone, laptop, digital camera.

Unit V

Management of Extension Organizations

- Management of Extension Organizations: Organization goals, virtual organization, organization culture, approaches to organizational change.
- The concept of management: Planning, organizing, delegation of authority, use of committees, coordination: involvement of organization at the local level, non-profit organizations, profit-making organizations, inputs management, Controlling: Effective controlling requires monitoring and evaluation, supervision, budgeting and auditing, reporting, self discipline.
- Staffing to fulfil the organizational objectives, stress in managing, organizational conflict, motivating people to work, communication in organizations.

Books for Reference:

- An Introduction to extension education - by S.V.Supe.
- Extension communication and management –by G.L. Ray.
- Extension Techniques for Rural Management by- C.Satapathy&Sabita Mishra.
- Education and communication for development –by O.P.Dahama and O.P. Bhatnagar.
- Ex tension Education – A. Reddy.

Core Elective Paper- 4(C)

Therapeutic Nutrition

100 marks ,Credits-5: Lectures: 50 hours

Mid Sem (1Hrs) 30+ End Sem (3Hrs) 70 marks

I class =1 hour

Learning Objectives:

- To acquire knowledge on interaction of immunity and infection
- To gain knowledge on social aspects of nutrition with special reference to diet related diseases.
- To understand the necessity of diet modification and application of this knowledge in planning diet.

Learning Outcome:

- Students will know the effect of the various diseases on nutritional status and nutritional and dietary requirements.
- Students will be able to recommend and provide appropriate nutritional care for prevention and treatment of the various diseases.

Unit – I

• Introduction to Diet Therapy

Objectives of Diet Therapy, Glycaemic Index, Dietary supplements.

- Food , nutrition and Drug interaction.

- Therapeutic Diets & Modification of Normal Diet:

. -Principles of therapeutic Nutrition. factors to be considered in planning therapeutic diets

Need for modifications of diets: Clear fluid diet, full fluid diet, soft diet, Regular normal diet

- Special feeding methods: Enteral nutrition, oral supplements, tube feeding, pre and postoperative diets

Unit – II

Diet in infection and fever

- Fever: host defence mechanism, causes, types, general dietary considerations
- Typhoid: symptoms, principles of diet, dietary suggestion
- AIDS: manifestation, symptoms, nutritional problem in HIV patients nutritional requirements

Unit – III

Diet in Diseases of Digestive tract:

- Constipation : types, dietary consideration, Correction of faulty habits
- Peptic Ulcer: Mechanism of ulcer formation, aetiology, symptoms and clinical findings, diagnosis, dietary management
- Diarrhoea: physiological disturbances in the body, fluid management

Unit IV

Diet in Cardio Vascular Diseases and Kidney diseases:

- Coronary heart disease: prevalence, clinical effects, risk factors, dietary management,
- Hypertension: pathogenesis of hypertension, symptoms, principles of diet, dietary management
- Glomeruli Nephritis: clinical symptoms, principle of dietary management

Nephrosis: clinical symptoms, principles of diet, dietary management

Unit – V

- **Diet in Diseases of metabolic disorder**

Diabetes Mellitus: Prevalence, Types, aetiology, symptoms, diagnosis, treatment, management of diabetes, nutritional requirements, dietary guidelines

- Obesity: aetiology, types treatment, diet therapy, principles of dietary management,

dietary guidelines, complications, weight management guidelines

- Under nutrition: aetiology,, nutritional and food requirement, dietary guidelines

Nutritional anemia: prevalence, causes, types, Iron deficiency anaemia, megaloblastic

Anaemia, dietary management

Books for References:

- Davidson S.R.Passmore, J.F.Brock and A Travsw ill Human nutrition and Dietitics, English language book society and Churchilllivingstone 1975.
- Robinson C.H : Normal and Therapeutic Nutrition memillan and Co.
- SuklaP.K: Nutritional problems of India, Prentice Hall of India.
- F.D.Antia :clinical Nutrition and Dietetics, Oxford University Press.
- Swaminathan M:.principles of Nutrition and Dietetics, Bappcs, BangloreVol-I and II.
- Park & Park: Textbook of preventive and social medicines.
- Begum Rehen:A textbook of foods Nutrition and Dietetics, sterling publications Pvt Ltd.
- Mathur: Guidance for planning Normal and Therapeutic diet.
- Subhangini A Joshi, Tata – McGraw- Hill publishing Company Ltd New Delhi. Nutrition and Dietics
- Dietetics -B Srilakshmi New age International (P) limited publisher.

Core Elective Paper- 4(D)
Family Finance and Consumer Behaviour
100 marks ,Credit-5, Lectures: 70 hours
Mid Sem (1Hrs)30+ End Sem (3Hrs) 70 marks
1class= 1 hour

Learning Objectives:

- Understand significance of family income and expenditure and saving for future
- Analyze relevance of consumer movement in India
- Gain knowledge on consumer protection laws and acts and reflect upon consumer rights and responsibilities.

Learning outcomes:

A successful completion of this course will enable students to-

- Become familiarized to the changing trend in consumerism
- Register and react as responsible consumers
- Gain expertise in consumer counselling

Unit- I

Consumer and Market

- Present Consumer scenario, consumer dynamics, consumer Vs customer, role of consumer in the National Economy, National Income, per capital Income.
- Consumer and the market, Definition and classification of market types, classification of consumer goods, consumer demand and supply, channel of distribution
- Consumer behaviour: changing nature of consumer behaviour to suit modern market, Factors influencing consumer behaviour

Unit- II

Household Income and Expenditure

- Household income- Types, sources, supplementation of family income, per capita income Household expenditure: Items of expenditure, mental and written plans, Factors influencing expenditure pattern, expecting exigencies and tackling them
- Account maintenance: methods of account keeping like balance sheets, account books, ledgers, income-expenditure records, Personal finance management: Tax implication: significance in budgeting, measures adopted and instruments used to ensure tax benefits, Engel's Laws of consumption, drafting well balanced family budgets for different income groups.

Unit- III

Family Savings and Credit Practices

- Consumer Credit- Concept, meaning, need, sources, credit cards, types of loan availed by families
- Mortgages: Definition and conceptual meaning

- Financial security arrangements: Family saving and investments- need, principles, channels of investment, Savings and saving institutions, Guidelines for wise saving practices.

Unit- IV

Consumerism in India

- Consumer education: Scope and Importance, objectives, Problems in Consumer education and empowerment: meaning, need and achievement with specific relevance to India.

Core Elective Paper- 4(E)
Textile Management
100 marks ,Credits-5: Lectures: 50 hours
Mid Sem(I Hr) 30+ End Sem(3Hrs) 70 marks
1class= 1 hour

Learning Objectives:

- To enable students to learn the concept of management prevailing in textile garment industries.
- To understand the process of managing the resources.

Learning Outcomes:

- Acquainted with human resource management with reference to Textile Industry.
- Understand the common training practices in the Textile Industry.

Unit I

- Introduction to textile management.
- Operation strategies.
- Human Resource Management: Meaning, nature, objectives, scope and functions, importance of human factor, HRM department with reference to Textile Industry.

Unit II

- Manufacturing operations scheduling, work centers, facility layout, work load and work assignments.
- Costing – Raw material: Fiber, Yarn, Fabric, Accessories.
- Processing, finishing, sewing and packing.

Unit III

- Training : Planning training programme, types of training: Induction Training, Job Training, Training for Promotion and Refresher Training.
- Common training practices in the Textile Industry.
- Management development programmes – objectives and methods.

Unit IV

- Formulating sales policies, structuring the sales force and its size, designing sales territories, fixing sales quotas and targets.

- Advertising and Sales Promotion methods, Logistics and Supply chain.
- Sales Forecasting: Need, Methods- Survey Method , Selection of appropriate forecasting.

Unit V

- Human rights: Definition, importance, fundamental rights. Human rights for women, children, workers in Textile Industry.
- Disaster Management: meaning, types of disaster management.
- Disaster management in Textiles and Apparel Industry, its rescue and relief.

Books for Reference:

- N. Gaither and G. Frazier, (2004) Operation Management, Thompson, Asia.
- S. A. Chunwala and D. R. Patol, (2004) Production and Operation Management, Himalayas.
- Decenzo and Robbins, (2004) Human Resource Management, Wiley, 6th edition.
- Mamoria, C. B. and Mamoria, S. (2005) Personal Management, Himalaya Publishing Co.
- Jack Donnelly, (2003) Universal Human Rights in Theory and Practice, Cornell, University Press, New York.

Gordon A. Berkstresser, (1984) Textile Marketing Management, Noyes Publications.