

**STATE MODEL SYLLABUS
FOR
UNDER-GRADUATE
COURSE IN HOME SCIENCE
(Bachelor of Arts Examination)**

**UNDER
UGC
CHOICE BASED CREDIT SYSTEM
2019**

SKILLS	Yellow
EMPLOYABILITY	Blue
ENTERPRENURESHIP	Red

B.A. Home Science

Semester	Course Opted	Course Name	Cre
I	Ability Enhancement Course	English Communications/ Environmental Science	2
	CC-1 Theory	Human Development I: The Childhood Years	4
	CC -I Practical	Human Development I: The Childhood Years Practical	2
	CC -2 Theory	Food and Nutrition	4
	CC -2 Practical	Food and Nutrition Practical	2
	GE -I Theory	Human Nutrition	6
II	Ability Enhancement Course	English Communications/ Environmental Science	2
	CC-3 Theory	Extension Education	4
	CC-3 Practical	Extension Education	2
	CC-4 Theory	Family Resource Management Practical	4
	CC-4 Practical	Family Resource Management Practical	2
	GE -2 Theory	Human Development and Family Studies	6
III	CC-5 Theory	Textiles	4
	CC-5 Practical	Textiles Practical	2
	CC-6 Theory	Dynamics of Communication	4
	CC-6 Practical	Dynamics of Communication Practical	2
	CC-7 Theory	Personal Finance & Consumer Studies	4
	CC-7 Practical	Personal Finance & Consumer Studies Practical	2
	SEC-I	Home based catering / Maternal and Child nutrition	2
	GE -3 Theory	Family Resource Management	6
IV	CC-8 Theory	Human Development II: Development in Adolescence and Adulthood	4
	CC-8 Practical	Human Development II: Development in Adolescence and Adulthood Practical	2
	CC-9 Theory	Nutrition: A Life Cycle Approach	4
	CC-9 Practical	Nutrition: A Life Cycle Approach Practical	2
	CC-10 Theory	Fashion Design	4
	CC-10 Practical	Fashion Design Practical	2
	GE -4 Theory	Family Resource Management	6
V	CC-11 Theory	Therapeutic Nutrition	4
	CC-11 Practical	Therapeutic Nutrition Practical	2
	CC-12 Theory	Physiology and Promotive Health	4
	CC-12 Practical	Physiology and Promotive Health Practical	2
	DSE -I Theory	Indian Textiles Heritage	4
	DSE -1 Practical	Indian Textiles Heritage Practical	2
	DSE -2 Theory	Communication Systems and Mass Media	4
	DSE -2 Practical	Communication Systems and Mass Media practical	2

Contd ...

VI	CC-I 3 Theory	Research Methodology in Home Science	4
	CC-13 Practical	Research Methodology in Home Science Practical	2
	CC-14 Theory	Socio Economic Environment	4
	CC-14 Practical	Socio Economic Environment Practical	2
	DSE -3 Theory	Marriage and family relationship	4
	DSE -3 Practical	Practical Marriage and family relationship	2
	DSE -4 Theory	Public Nutrition	4
	DSE -4 Practical	Public Nutrition Practical	2
		Total	140

HONOURS PAPERS:

Core course – 14 papers

Discipline Specific Elective – 4 papers

Generic Elective for Non Home Science students – 4 papers.

Total – 100 marks

Credit per paper – 6

Teaching hours per paper – 50 hours + 10 hours tutorial

Marks per paper with practical – Midterm : 15 marks, End term: 60 marks, Practical: 25 marks

Generic Elective

Marks per paper – Mid term : 20 marks, End term : 80 marks

HOME SCIENCE PASS

Core course – 4 papers

Discipline Specific Elective – 2 papers

Generic Elective -1 paper

SEC- 3 papers

BA HOME SCIENCE (HONS)

CORE COURSES

Core Course 1: HUMAN DEVELOPMENT 1: THE CHILDHOOD YEARS

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES:60

Objective

1. To understand importance of Human development & principles involved in it.
2. To study the developmental pattern of children starting from prenatal period up to middle childhood years in the areas of physical ,motor, social , emotional & language development.

Unit 1: Introduction to Human Development

- Definition of growth and development, scope of child development
- Scientific methods of Studies of Child Development
- Principles of Growth and Development
- Stages of human Development

Unit II: Prenatal Development, Birth and the Neonate

- Conception, Pregnancy
- Stages of Prenatal Development and factors affecting prenatal Development
- Capacities of the new born

Unit III: Infancy and Preschool years (0-5 years)

- Physical and motor development
- Social and Emotional development
- Language development

Unit IV: Late Childhood years (6-10 years)

- Physical and motor development
- Social and emotional development
- Language development

PRACTICAL

1. Prepare poster showing different emotions (pleasant and unpleasant).
2. Plan and develop activities to facilitate cognitive development through preparation of materials such as Posters, toys etc.

3. Study the role of familial (parents) and non familial (peers/teachers/neighbors) people in a child's life

RECOMMENDED READINGS

Text book:

- Hurlock, E.B. (2008). Developmental Psychology. Tata McGraw-Hill. New Delhi
- Singh, A. (Ed). (2015). Foundations of Human Development: A life span approach. New Delhi: Orient Black Swan.

Reference book:

- Bee. H.(1995). The developing child. Harper Collins.
- Berk, L.E. (2007). Development through the lifespan Delhi: Pearson Education.
- Rice. F.P. (1998). Human development: A lifespan approach. New Jersey: prentice Hall.
- Santrok, J.W. (2007). A topical approach to life-span development. New Delhi: Tata McGraw- Hill.

Core course 2: FOOD AND NUTRITION

(CREDITS: THEORY-4 PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To understand basic concepts of food, nutrition and their related terms
- To study the functions, requirement & deficiency of macro & micronutrients in the human body.
- To examine the difference between weights & measures of raw & cooked foods.
- To gain knowledge on nutritional contribution of various foods and principles involved in its cooking.

Unit I: Basic concepts in food and nutrition

- Basic terms used in study of food and nutrition.
- Understanding relationship between food, nutrition and health.
- Classification of food
- Functions of food- physiological, psychological and social.

Unit II: Nutrients

- Classification, Functions, dietary sources, daily requirement and clinical manifestations in deficiency/ excess of the following nutrients:
- Carbohydrates, Proteins and Lipids
- Fat soluble vitamins- A, D, E and K
- Water soluble vitamins- Thiamin, Riboflavin, Niacin, Folate, Vitamin B12 and Vitamin C,
- Minerals- Calcium, Iron, Zinc and Iodine.

Unit III: Food groups

Nutritional contribution and changes during cooking of the following food groups:

- Cereal
- Pulses
- Fruits and vegetables
- Milk & milk products
- Meat, poultry and fish

Unit IV: Methods of cooking and enhancing the nutritional quality of foods-

- Methods of cooking- Dry, moist, frying and microwave cooking---their advantages and disadvantages.
- Enhancing the nutritional quality of foods ---Supplementation, germination, fermentation, fortification and GM foods.

PRACTICAL

1. Weights and measures- Raw and Cooked food (Rice, dal, chapatti, egg, seasonal vegetables)
2. Understanding the principles of cooking involved and nutritional quality of following foods

- Cereals: Boiled rice, pulao, chapatti, paratha, puri, pastas
 - Pulses: whole, dehusked
 - Vegetables: curries, dry preparations
 - Milk and milk products: Kheer, custard
3. Understanding the principles of cooking involved and nutritional quality of the following foods.
- Baked products: Biscuits, cookies, cakes, tarts and pies
 - Snacks: pakoras, cutlets, samosas, upma, poha, and sandwiches
 - Salads: salads and salad dressings.
 - Fermented products : Idli, dosa, appam, kulcha, dhokla etc.

RECOMMENDED READINGS

Text Book:

- Sri lakshmi (2007) .Food science .4th edition. New age international Ltd.
- Swaminathan,M. -Essentials of Food and Nutrition. Ganesh and Company

Reference book:

- Bamji MS, KrishnaswamyK.Brahman GNV (2009). Textbook of Human Nutrition 3rd edition. Oxford and IBH publish Co Pvt Ltd.
- Wardlaw and insel MG Insel PM (2004). Perspectives in Nutrition's sixth edition Mosby.
- Chadha R and Mathur P (eds) Nutrition: a lifecycle approach. Orient Blackswan, New Delhi. 2015
- Khanna K, Gupta S, Seth R, Mahhna R, Rekhi T (2004). The art and science of cooking; a practical manual revised edition elite publishing house pvt Ltd.
- Raina U. Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S (2010). Basic food preparation -A complete manual, fourth edition. Orient black swan Ltd.

Objectives:

- To enable the student to understand the meaning, principles, philosophy of Home Science Extension Education.
- To enable the student to know about different methods used in Extension Education.
- To enrich the Knowledge of the students about teaching learning process in Extension education.

UNIT -I**Extension Education-**

- Definition needs and objectives.
- Principles of extension education.
- Behavioral changes brought about by extension education.

UNIT II**Role of Extension Education in Development –**

- Role of Home Science & its inter relationship with Community Development.
- Role & qualities of Home Science extension workers.

UNIT III**Methods of teaching in Extension Education-**

- Individual, group & mass methods. Individual Methods: Farm and Home Visits, Office Calls, Telephone Calls, Personal letters.
- Group Methods: Method Demonstration, Result Demonstration. Group Discussion, Field Trips, Lecture, Seminars and Workshop
- Mass Methods: Leaflets, Circular Letter, Radio, T.V. Bulletins, News Articles, Their advantages & disadvantages.

UNIT IV**Teaching-Learning process-**

- Meaning, principles & steps in teaching learning process.
- Criteria for effective extension teaching. Elements of teaching and learning situation.
- Criteria for effective learning. Principles of learning. Factors affecting learning.

Core paper III: Practical**Practical: 25 Marks**

- Prepare posters: women empowerment, violence against women, child &

- maternal health issues, environmental pollution.
- Prepare a project report within one thousand words on any one of the above issues.

Text Book:

- 1. Education and communication for development – O.P. Dahama and O.P. Bhatnagar.
- 2. Extension Education and Communication – V.K. Dubey and Indira Bishnoi

Reference Books:

- Extension communication and management – G.L. Ray.
- Extension Techniques for Rural Management - C. Satapathy & Sabita Mishra.
- Extension Education – A. Reddy

Core course 4 FAMILY RESOURCE MANAGEMENT

(CREDITS: THEORY -4 PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To achieve goals in life through judicious resource management
- To utilize the available resources effectively.

Unit I: Introduction to Family Resource Management and its application

- Concept and scope of family resource management
- Processes in resource Management
- Decision Making

Unit II: Resources

- Meaning, classification and characteristics of family resources, factors affecting utilization of resources.
- Motivating factors in home management: values, standards and goals and their inter-relationship.

Unit III: Availability and management of specific resources by an individual/ family

- Money-Types of income, Supplementing family income
- Time-Concept, Factors and steps in time management

Unit IV: Availability and management of specific resources by an individual/ family

- Energy- Efforts, Fatigue, Work simplification
- Steps in successful event planning—Planning, Budgeting and Evaluating.

PRACTICAL

1. SWOC analysis
2. Building decision making abilities through management games (Any two)
3. Preparation of time plans for one day for self and family.
Event planning for family occasion.(Any one).

RECOMMENDED READINGS

Text Book

- Rao V.S and Narayana P.S., Principles and practices of management, 2007, konark publishers Pvt Ltd.
- Nickell, P and Dorsey, J.M., Management in family living,2015,CBS Publishers and Distributors

Reference Book

- Management for Modern Families – I.H.Gross and E.W. Crandall.
- Home Management - Vergese, Ogale, Srinivasan
- Home Management for Indian Families. – M.K.Mann
- Home Management – Education Planning Group, Arya publishing house,Delhi.
- Text book of Home Science- Premlata Mallick.
- An Introduction to family Resource management-Premavathy Seetharaman, Sonia Batra & Preeti mehera
- Koontz H and O'Donnel C, 2005Management- A System and Contingency analysis of Managerial Functions. New York: Mc Graw – Hill Book Company
- Kretiner, 2009 , Management Theory and Applications , Cengage Larning : India

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To know the manufacturing process of different types of textile fibers, their structures and uses
- To know the manufacturing process of different types of fabrics.
- To impart knowledge on different textile finishes

Unit I: Introduction to Textile Fibres

- Meaning and classification of fibres
- Production, properties and usage of fibres
Natural fibre: cotton, flax, silk and wool
Man-made fibers: Rayon(Viscose)

Unit II: Yarn construction and their properties

- Yarn formation
- Mechanical spinning (cotton system, wool system, worsted system) chemical spinning (wet, dry, melt)
- Types of yarns: Staple and filament, simple yarn, complex yarns

Unit III: Techniques of fabric construction, finishing, dyeing and printing

- Parts of a loom
- Operations of a loom
- Classification of weaves (Plain, Basket, Ribbed, Twill, Satin, Sateen)- Structure, Properties, usages

Unit IV: Finishing

- Finishing-Mechanical finishes-Beetling, Calendaring, Embossing, Glazing, Napping.
- Chemical Finishes- Mercerization, Ammoniating.
- Dyeing - Types of dyes

PRACTICAL

1. Fiber identification tests- visuals, burning, microscopic
Yarn identification- single, ply, cord, textured, elastic, monofilament, multifilament and spun yarn.
2. Thread count and balance, Dimensional stability,
3. Weaves- Identification and their design interpretation on graph (any three)

RECOMMENDED READINGS:

Text Book:

Corbman P.B. (1985) Textiles- Fiber to fabric (6th Edition) , Gregg Division /Mc Graw Hill Book Co, US.

Reference Book:

- Joseph, M.L. (1988) Essentials of Textiles (6th Edition), Holt , Rinehart and Winston Inc, Florida.
- Vilensky G. (1983) Textile science, CBS Publishers and Distributors, Delhi.
- Tortora, G. Phyllis, Understanding Textiles, Mc Millanm Co. USA.
- Sekhri S. (2013) Textbook of Fabric Science: Fundamentals to finishing, PHI Learning, Delhi.

Core course 6: DYNAMICS OF COMMUNICATION

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To understand the different spheres of communication
- To understand the concept, process, models and process of communication

Unit I: Communication:

- Historical background, concept and nature
- Functions of communication

- Types of communication- formal and informal communication; verbal and non-verbal communication
- Scope of communication- education, corporate communication, management of organizations advertising and public relations.

Unit II: Principles, elements and models Communication

- Signs, symbols and codes in communication
- Postulates / principles of communication
- Elements of communication and their characteristics
- Models of communication- -Aristotle, Losswell, Shannon & Weaver, Osgood and Schramm,
- Riley models
- Barriers to communication

Unit III: Effective communication

- Concept, nature and relevance to communication process: Empathy, Persuasion, Perception, Listening

Unit IV: Diffusion, adoption & innovation-

Concept & elements of diffusion

Adoption – Characteristics, stages& factors associated with adoption. Sources of information, characteristics of adopters.

PRACTICAL

1. Developing skills of communication by forming small groups among the students.
2. Review of selected issues published in newspapers.
3. Writing short stories, related to health and nutrition for conveying messages to the society.

RECOMMENDED READINGS

Text book:

- Devito. J. (1998) Human communication New York: Harper & Row.
- Extension communication and management – G.L.Ray.

Reference Book:

- Barker, L. (1990) “Communication” New Jersey prentice Hall Inc 171.
- Patri and Patri (2002); Essentials of communication Greenspan publication

Core course 7: PERSONAL FINANCE AND CONSUMER STUDIES

(CREDITS: THEORY-4 PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To gain knowledge about the need of consumer education
- To create awareness among consumers through education

Unit I: Income and expenditure

- Budgets, maintaining household accounts
- Factors influencing expenditure
- Family savings and investments-objectives and types of savings.

Unit II: Consumer in India: Consumer problems and education

- Definition of a consumer
- Role of consumers - National income, per capita income.
- Changing nature of the business world, e- commerce, e-business.
- Consumer problems- products and service related problems and solution.

Unit III: Consumer Protection

- Consumer education and empowerment.
- Consumer protection

Unit IV: Legislative Measures for Consumer Protection, Standardization and quality control measures:

- Consumer organizations – Role and function
- Basic legislative framework for consumer protection in India- consumer protection Act 1986, alternative redressed mechanisms, mediation centers.
- ISI, FPO, AGMARK, ISO FSSAI, Eco mark, , handloom mark,.

PRACTICAL

1. Evaluation of advertisements in the print media
2. Evaluation of labels on different types of food products (at least three).
3. Learning to fill up different forms of banks and post office. (at least three).

RECOMMENDED READING

Text Book :

- Khanna S.R. Hanspal S. Kapoor S. & Awashti H.K. 2007, Consumer affairs, Universities press India Pvt Ltd.

Reference Book :

- Sawhney H.K & Mital, M, 2007, Family finance & consumer studies, Elite publishing House Pvt Ltd.
- Seetharaman P. and Sethi, M. 2001, Consumerism, Strength and Tactics, New Delhi CBS Publisher

Core Course 8: HUMAN DEVELOPMENT II

DEVELOPMENT IN ADOLESCENCE AND ADULTHOOD

(CREDITS: THEORY-4 PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To know the different developmental tasks during adolescence.
- To know the socio-emotional and cognitive developments of adulthood.

Unit I : Puberty

Characteristic and age at puberty

Puberty growth spurt

Body changes at puberty

Effect of puberty

Unit II : Adolescence

- Characteristics of adolescent years
- Developmental tasks during Adolescence
- Physical changes
- Emotional changes

Unit III : Early Adulthood

- Developmental tasks of early adulthood
- Characteristics of early adulthood
- Changes in interest
- Social mobility

Unit IV : Early Adulthood and family adjustment

- Marital adjustment
- Adjustment to parenthood
Adjustment to singlehood

PRACTICAL

1. To study creativity during adolescence
2. Use of the questionnaire method to study the responsibility of an adult in roles as :
Father/ husband
Mother/wife
3. Use of the questionnaire method to study the responsibility of an adult in roles as :
 - Single parent
 - Employed woman

RECOMMENDED READINGS

Text book:

- Singh A. (Ed.) 2015 : Foundation of Human Development, A life span approach , New Delhi, Orient Black Swan.

Reference Book:

- Berk. L.E. (2007) Development through the lifespan, Delhi: Person Education.

- Rice F.P(1998) Human Development: A lifespan approach, New Jersey: Prentice Hall
- Rutter, M. and Rutter , M (1992) A topical approach to life-span, development, New Delhi Tata Mc Graw-Hill.
- Sntrock J.W. (2007) A tropical approach to life- spam development, New Delhi: Tata McGraw- Hill
- Tennant, M and Pogson, p. (1995) Learning and Change in the Adult year San Francisco, Jossey- Bass

Core Course 9: NUTRITION: A LIFE CYCLE APPROACH

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To know the importance of nutrition in different stages of life cycle.
- To study the nutritional need in special conditions.

Unit I : Principle of meal planning

- Food groups and food exchange list
- Factors affecting meal planning.
- Dietary guidelines for Indians-2017

Unit II

Nutrition during childhood

RDA, nutritional guidelines,
and healthy food choices-

- Infants
- Preschool children
- School children
- Adolescents

Unit III: Nutrition during adulthood

RDA, nutritional guidelines, healthy food choices.

- Adult

- Pregnant woman
- Lactating mother
- Elderly

Unit IV: Nutrition for special conditions

- Nutrition for physical fitness and sports
- Feeding problems in fussy eaters. (children)
- Food Consideration during natural disasters e.g. floods,

PRACTICAL

1. Prepare a table on rich sources of different nutrients
2. Prepare a of food exchange list
3. Planning and preparation of diets for –
 - Preschooler
 - Pregnant and Lactating woman
 - Elderly

RECOMMENDED READINGS

Text Book:

- Human Nutrition-B. Srilaxmi , New age publication.
- Principles of Nutrition and Dietetics-Swaminathan M.

Reference Book:

- Gopalan C, Rama Sastri BV, Balasubramanian SC (1989)
- Nutritive Value of Indian Foods. National Institute of Nutrition, ICMR, Hyderabad.
- Seth V and Singh K (2006). Diet Planning through the Life Cycle: Part 1
- Bamji MS, Krishnaswamy , K. Brahman GNV(2009), Textbook of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co. Pvt. Ltd
- Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2013). Textbook of Nutrition and Dietetics. Phoenix Publishing House Pvt. Ltd.
- Wardlaw GM, Hampi JS, DiSilvestro RA (2004). Perspectives in Nutrition, 6th edition. McGraw Hill.
- Chadha R and Mathur P eds. Nutrition: A Lifecycle Approach. Orient Blackswan, New Delhi. 2015.

Core Course 10: FASHION DESIGN

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES:60

Objectives:

- To support and collaborate with fashion, textiles and design industry to achieve a sustainable progress.
- To give advance knowledge and pushing the boundaries in fashion, textile and designing.

Unit I: Fashion

Definition and background of fashion in India, fashion cycle

Factors favoring and retarding fashion

- Role of a designer
- Leading Fashion designing centers in India NIFT, NID, SID, NIIFT

Unit II: Importance of clothing

- Origin of clothing.
- Functions of Clothing
- Factors influencing selection of clothing
- Clothing related to various activities

Unit III: Selection of Clothing

- Selection of clothes according to body built
- Use of colours in clothing.
- Selection and evaluation of ready-made garments

Unit IV: Aesthetics in Dress.

- Elements and principles of design
- Structural and applied design
- Sleeves, necklines, collars, pockets

PRACTICAL

1. Flat sketching of Sleeves, necklines,
2. Flat sketching of collars, pockets

3. Collections of dress designs of famous designers.

RECOMMENDED READINGS

Text Book: Tata S.L., Edwards M.S., 1982, The Complete Book of Fashion Design, Harper and Row Publications, New York.

- The complete Book & Fashion Design, Harper and Row Publication, New York by Tate, S.L., Edwards, M.S 1982

Reference Book:

- Brown, Patty, Rice J., 1998, Ready to Wear Apparel Analysis. Prentice Hall.
- Marshall S G, Jackson H O, Stanley MS, Kefgen M & Specht T, 2009, Individuality in Clothing & Personal Appearance, 6th Edition, Pearson Education, USA.

Core Course 11: THERAPEUTIC NUTRITION

(CREDITS: THEORY-4, PRATICAL-2)

THEORY

LECTURES: 60

Objectives:

- To study about principles of therapeutic nutrition
- To know the nutritional need during different disease conditions.

Unit 1: Principles of nutrition care-

- Nutrition Care Process
- Therapeutic adaptations of normal diet
- Progressive diets- Clear fluid, full fluid, soft and regular

Unit II: Etiology, clinical features and nutritional management:

- Weight Imbalances- Over weight and obesity, Under weight

- Eating disorder- anorexia nervosa and bulimia
- Type 1 and Type 2 -Diabetes Mellitus
- Hypertension and Coronary Heart Disease

Unit III: Etiology, Clinical features and nutritional management of the following

- Diarrhea
- Lactose intolerance
- Liver: Infective Hepatitis

Unit IV: Etiology clinical features and nutritional management of the following

- Typhoid
- Tuberculosis
- HIV

PRATICAL

Planning of Diets for the following_

1. Therapeutic Diet- Normal, soft, clear and full fluid
2. Obesity, Type 2 Diabetes
3. Hypertension and CHD

RECOMMEDED READING

Text Book:

- Antia,F.P Clinical Dietetics and Nutrition
- Srilakshmi.B (2014) Dietetics. New Age International Publishers

Reference Book:

- Khanna, K . Gupta S, Seth R, Passi, S.J. Mahan, R. PuriS(2013), Text book of Nutrition and Dietetics Phoenix Publishing House Pvt Ltd.
- Mahan L K and Escott Stump S (2013) Krause's food & Nutrition Therapy, 13thed Saunders – Elsevier
- Stacy Nix (2009) Willam's Basic Nutrition and Diet Therapy 13th Edition , Elsevier Mosby

- Seth V and Sing K (2007) Diet Planning through the life Cycle Part 11 Diet Therapy A Practical Manual 4, edition, Elite Publishing House Pvt. Ltd.
- ICMR (2010) Nutritive value of Indian Foods. National Institute of Nutrition , Indian Council of Medical Research Hyderabad

Core Course 12: PHYSIOLOGY AND PROMOTIVE HEALTH

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES; 60

Objectives:

- To understand the structure and functions of various organs of the body
- To focus on different mechanism of human body

Unit 1: Respiratory and Circulatory Physiology

- Structure of Lungs and its function
- Structure of Heart and its function
- Different type of blood circulation and cardiac cycle

Unit II: Endocrine Physiology

- Actions and disorders of pituitary, thyroid, parathyroid, adrenal and pancreatic hormones.

Unit III: Renal and Reproductive physiology

- Structure of Kidney and its function
- Male reproductive organs and its function, Female reproductive organs and their functions,
- Physiology of Menstruation and Menopause

Unit IV: Promotive Health

- Concept of Health, Disease and its prevention
- General risk factors and prevention of Anemia, Jaundice and Cancer
- Drug abuse and Alcoholism
- Family planning and contraception

PRATICAL

1. Case study of Iron deficiency Anemia, Investigation and diagnosis, Blood indices
Measurement of blood pressure by using sphygmomanometer.
2. Demonstration of procedures of clinical examination to see for pallor, jaundice, edema
and dehydration and
3. Basic First Aid procedures CPR, Burns.

RECOMMENDED READINGS

Text Book:

- J.E. Park and K. Park (2009). Park's textbook of preventive and Social
Medicine, 20th edition. M/s Banarsi Das, Jabalpur.
- Ross and Wilson (1973). Foundation of Anatomy and physiology, medical
division of Longman Group Ltd

Reference Book:

- Ganong WF (2003). Review of Medical Physiology, 21sted Mc Graw Hill.
- Yash Pal Bedi (1980). A Handbook of social and preventive medicine, Atma
Ram and Sons.

Core Course 13: RESEARCH METHODOLOGY

(CREDITS: THEORY-4 PRATICAL-2)

THEORY

LECTURES: 60

Objectives:

- To understand the meaning and process of research in social sciences.
- To know about the technique of collection, analysis and interpretation of data.
- To understand the meaning & process of research in social sciences.
- To have fundamental knowledge about analysis of data & the diagrammatic
representation of data.
- To learn the techniques of interpretation of data & report writing.

Unit1: Research- Meaning, purpose and types

- Theoretical, empirical
- Descriptive, analytical
- Applied, fundamental
- Qualitative, quantitative

Unit II: Research Design

- Exploratory
- Explanatory
- and Experimental

Unit III: Sampling, Tools and techniques

- Types of sampling
- Collection of data- primary and secondary data
- Tools and techniques of data collection - observation , interview schedule , questionnaire, case study, FGDs
- Measures of central tendency- Mean , Median and Mode

Unit IV: The Research Process

- Identifying the problems
- Review of literature
- Formulation of objectives and hypothesis
- Preparing the research design
- Data collection
- Data analysis
- Interpretation and report writing
- Bibliography/reference

PRATICAL

1. Prepare a schedule/questionnaire on a topic
2. Make a pilot study by applying the above schedule.
3. Solve a given problem by using mean

RECOMMENDED READINGS

Text Book:

- Kothari C.R. (2008) Research Methodology: Methods and Techniques 2nd Ed. New Age International Pvt Ltd. New Delhi.

Reference Book:

- Kumar R. (2006) Research Methodology: A step by step Guide for Beginners, Sage Publication, New Delhi.

- Kelinger F.N. and Lee, H.B (2000) Foundations of Behavioral Research 4th Ed. Harcourt College Publishers.
- Black J.A & Champion D.J. (1976); Methods and issues in Social Research New York: John Wiley and Sons.

Core Course 14: SOCIO ECONOMIC ENVIRONMENT

(CREDITS: THEORY:-4, PRACTICAL -2)

THEORY

LECTURES: 60

Objectives:

- To know the relationship between society, economy and environment.
- Create awareness among people regarding constraints in economic environment and its consequences.

Unit -1: Sociological Concerns and Orientation

Sociological Orientation

- Society, Culture and institutions
- Family, Kinship and Relationships
- Social mobility and social change
- Cultural diversity in contemporary society.

Unit-II: Economics Theory and Environment

- Definition, Scope of Economics
- Wants- Classification and Characteristics
- Utility- Law of Diminishing Marginal Utility, Law of Equi- Marginal Utility , Demand- Law of Demand, Elasticity of Demand.
- Engel's Law of Consumption

Unit III. Money, Banking and Public Revenue

- Types and function of money, inflation
- Types and functions of banks
- Public Revenue.

Unit IV. Indian Economic Environment

- Constraints on growth: Issue of population, income distribution, poverty, unemployment and migration, food security.
- Recent development programmes of the Government of India : Jana Dhana Yojana, Sarva Sikha Yojana , Objective and Achievement
- Issues related to gender discrimination: IMR, MMR, Sex Ratio, Literacy

PRACTICAL

Do a project on any of the following topic

- Changing families & Relations in Society
- Changing status and roles at home and work place
- Gender discrimination.
- current economic issues (Development and Environmental)

RECOMMENDED READINGS

Text Book:

- Ahuja H.L., 2010, Modern Micro Economics. Sultan Chand & sons
- Dhingra IC and Garg VK, 2010, Introductory Economic Theory. Sultan Chand & Sons
- Mishra &Puri, Recent edition 2014, Indian Economy, Himalaya Publishing House.

Reference Book:

- Abraham, M. F. (2006). Contemporary Sociology: An introduction to concepts and theories: New York: Oxford University Press.
- Beattie, J. (1964). Other cultures. Cohen and West.
- Das, V. (Ed.) (2003) The Oxford companion to sociology and social anthropology: volume 1 and 2. New Delhi: Oxford University Press.
- Johnson, M.H. (2001). Sociology: A systematic introduction. New Delhi: Allied Publishers Limited.
- Rawat, H.K. (2007). Sociology: Basic concepts. New Delhi: Rawat Publications.
- Srinivas, M.N. (Ed.) (1996). Caste: Its twentieth century avatar. New Delhi: Viking

Penguin

- Mithani D.M., 2010 New Edition, Macro-Economics. Himalaya Publishing House
- Sundaram K.P.M., 2010, Introduction to Economics. RatanPrakashan

DISCIPLINE SPECIFIC ELECTIVE (DSE)

DSE 1: INDIAN TEXTILES HERITAGE

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES: 60

Objectives

- To study about different traditional textile and crafts of India
- To know the care and storage techniques of different traditional textile.
- To study the socio- economic significance of traditional textile and its popularity in modern India.

Unit I: Study of Textile Crafts of India: with reference to history, production centers, techniques, designs, colours and products

Woven Textiles -Benaras Brocades, Jamdanis and Baluchars of Bengal, Kani Shawls of Kashmir.

Unit II: Study of Textile Crafts of India: with reference to history, production centers, techniques, designs, colours and products

Embroidered Textiles-Kanthalas of Bengal, Kasuti of Karnataka, Phulkari of Punjab, Chikankari of Uttar Pradesh, Kashida of Kashmir, Gujarat embroideries.

Unit III: Study of Textile Crafts of India: with reference to history, production centers, techniques, designs, colours and products

- Painted and Printed textiles –Kalamkaris of Andhra Pradesh, Dabu printing of Rajasthan ,Ajarakh prints of Gujarat
- Dyed textiles –Bandhnis of Rajasthan and Gujarat, Ikats- Patola of Gujarat.
- Bandhas of Orissa

Unit IV. Conservation of Traditional Textile

- Evolution and Socio- economic significance of Khadi, Handloom and Handicraft sector
- Sustenance of Traditional textile crafts

PRACTICAL

1. Traditional Embroideries
2. Tie and dye
Batik
Block Printing
Stenciling
3. Visit to craft Centers.

Recommended Readings.

Text Book:

- Chattopadhyaya K.D. 1995, Handicrafts of India, Wiley Eastern Limited Delhi

Reference Book:

- Agrawal O.P. 1977 Care and Presentation of Museum Projects –II NRL
- Das Shukla, Fabric Art- Heritage of India, Abhinav Publications N.Delhi

DSE II: COMMUNICATION SYSTEMS AND MASS MEDIA

(CREDITS: THEORY-4 PRACTICAL-2)

THEORY

LECTURES:60

Objectives:

- To achieve the target of the organization by motivating and influencing the audience.
- To inform the public locally or globally.

Unit I: Self and communication

- Awareness of self in communication
- Intrapersonal communication
- Self-concept and self esteem

Unit II: Interpersonal communication

- Concept, types and functions of interpersonal communication
- Dyadic, small and large group communication
- Stages in human relationship development
- Small group communication: types and functions

Unit III: Organization and public communication

- Organizational communication: concept types, functions and networks
- Public communication- concept and techniques

Unit IV: Mass Communication and Mass media

- Mass communication – concept, significance, functions and elements
- Print media: types, nature, characteristics, reach, access.
- Radio: types, nature, characteristics, reach, access.
- Television and cinema: types, nature, characteristics, reach, access.
- ICTs: types, characteristics, reach and access.

PRACTICAL

1. Know yourself exercises.(Johari's window)
2. Studying group dynamics in organizations- formal and informal
3. Audience analysis- Leadership, listenership and viewership studies ,Content analysis of mass media

RECOMMENDED READINGS

Text Book:

Roy, G.L. Extension, Communication and Management.

Devito, J. (1998) Human communication. New York: Harper & Row.

Baran Stanley J (2009). Introduction to mass communication, Mc Graw hill medical publishing.

Reference Book:

- Barker, Larry Lee (1990) communication. Eaglewood cliffs, New Jersey: Prentice Hall.
- Mc Quail, D. (2000) Mass communication theories London: sage Publications

- Vivian, J (2012). The Media of mass communication, Pearson.
- Dominick, Joseph R. (2012). Dynamics of mass communication: media in transition ,
Mc Graw hill education
- Baran, Stanley J (2014). Mass communication theory, Wadsworth publishing

DSE 3: MARRIAGE & FAMILY RELATIONSHIP

(CREDITS: THEORY 4 AND PRACTICAL:2)

THEORY

LECTURE:60

Objectives:

- To understand the concept of marriage & its importance in family life.
- To acquire knowledge about the different pattern of marriage rituals & ceremonies existing in Indian society.
- To understand the problems of Family & Marital life prevalent in the society.

UNIT I: Marriage as an Institution

- Meaning, definitions, functions& importance of marriage.
- Types of marriages- Monogamy, polygamy, Exogamy, Endogamy, polyandry, Polygyny.
- Marriage in contemporary society.

UNIT II: Marriage Rituals & Ceremonies in different Indian Communities

- Significance of marriage.
- Process of marriage among Hindu, Muslim & Christian Community.
- Adjustments in marriage- Sex, financial, in laws and among working couples.

UNIT III: Family, kinship and relationship

- Meaning, definition, importance, characteristics & functions of family.
- Contemporary Family types prevalent in India.
- Family life Cycle: meaning, importance, & stages of family life cycle.
- Family- in- transition- Merits & demerits.

UNIT IV: Problems of Family

- Prolonged sickness/illness, accidents widowhood, unemployment, economic distress /poverty, broken family, family with a disabled and suicide in the family.
- Marital problems-Marital disharmony& conflict, separation & divorce, single parenthood, loss of spouse.

Practical

1. Do a Project work on a topic related to marriage and family.

RECOMMENDED READINGS

Text Book:

- Marriage and Family in India – Kapadia

Reference Books:

- The Family – Goode, W.J.
- India Social Problems – Madan G.R.
- Sociology – Vidya Bhusan
- Indian Society and Social Institutions – Nukhi H. R. Surjeet.
- An Introduction to Sociology – Vidya Bhusan and Sachadeva.
- Indian Social Problems. Vol. I and II – G.R. Madan.

DSE-4: PUBLIC NUTRITION

THEORY

LECTURES: 60

Objectives:

- To understand the importance of public health nutrition and its role
- To gain knowledge on different ongoing nutrition programmes.
- To study the different methods for assessment of nutritional status.

Unit 1 Concept and scope of public nutrition

- Definition, Concept and Scope of public health nutrition
- Objectives , principles and scope of nutrition and health education and its promotion
- Role of Public nutritionist

Unit II: Nutritional problems and their implications

Etiology, prevalence, clinical features and preventive strategies of

Under nutrition -

- Protein energy malnutrition, nutritional anemia, vitamin A deficiency, iodine deficiency disorders.
- Over nutrition- obesity, coronary heart disease, diabetes.
- Fluorosis

Unit III: Assessment of nutritional Status

- Objectives and importance
 - Methods of Assessment
- A. Direct- Clinical signs, nutritional anthropometry, biophysical tests.
- B. Indirect- Diet Surveys, Statistics.

Unit IV -International and National Nutrition Policy and Programmes:

- International Agencies and their functions – World Health Organization (WHO), Food and Agriculture Organization (FAO), United Nations International Children's Emergency Fund (UNICEF), Cooperatives for Assistance & Relief Everywhere (CARE).
- National Agencies and their functions , Indian Council of Agriculture (ICAR), Indian Council of Medical Research (ICMR), National Institute of Nutrition (NIN). National Institute of Public cooperation & child development(NIPCCD)

PRACTICAL

1. Assessment of nutritional status:
- Anthropometry- weight and height measurements
 - Interpretation of data on the basis of BMI of ten numbers of adolescents

RECOMMENDED READINGS

Text Book:

- B Srilakshmi, Nutrition Science, New Age Publication
- Park K (2011) Park's Text book of Preventive and Social Medicine, 21st Edition, M/S Banarasidas Bhanot Publisher, Jabalpur, India

Reference Book:

- Wadhwa A and Sharma S (2003) Nutrition in community – A Text book, Elite Publishing House Pvt. Ltd New Delhi

- Park K (2011) Park's Text book of Preventive and Social Medicine, 21st Edition, M/S Banarasidas Bhanot Publisher, Jabalpur, India
- Bamji MS Krishnaswamy K and Brahman GNC (Eds) (2009), Text Book of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co Pvt Ltd New Delhi,
- ICMR (2011) Dietary Guideline for Indian- A Manual National Institute of Nutrition, Indian Council of Medical Research Hyderabad.
- Bamji MS Krishnaswamy K and Brahman GNC (Eds) (2009), Text Book of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co Pvt Ltd New Delhi,
- Jelliffe DB, Jelliffe ERP, Zarfar A and NeumananCG(1989) Community Nutritional Assessment with special reference to less technically developed countries, Oxford University Press Oxford.
- World Health Organization (2006) WHO Child growth Standards. Methods and development , length/height for age, weight of age, weight-for length , weight for height and body mass index for age ([http:// who.int/child growth/standards/en/](http://who.int/child-growth/standards/en/))

SKILL ENHANCEMENT COURSES (SEC)

SEC-A: HOME BASED CATERING

(CREDITS: THEORY 6)

THEORY

LECTURES: 60

Objectives:

- To know different type food service unit.
- To study the different-step towards planning and execution of food service unit.

Unit I: Introduction of food service

Types of food service establishments

- State and local regulations related to catering.

Unit II: Food production

- Menu planning in food production units - Importance of menu
- Factors affecting menu planning in different kinds of food service units
- Quantity food production: Standardization of recipes, quantity food preparation techniques , recipe adjustments and portion control

Unit III: Resource management in food service unit

- Money
- Manpower
- Time
- Facilities and equipment

- Utilities

Unit IV: Planning of food service unit

- Preliminary planning - Survey of types of units, identifying clientele, menu, operations and delivery

Unit V: Purchase and storage in food service unit

- Food purchase and storage

Unit VI: Maintenance of hygiene and sanitation in food service unit

- Hygiene and sanitation
- Packaging

Recommended readings:

Text Book:

Taneja S and Gupta SL (2001) Entrepreneurship development, Galgotia publishing.

Reference Book:

- West B Besie & Wood Levelle (1988) Food service in institutions 6th Edition revised By Hargar FV, Shuggart & Palgne Palacio June, Macmillian publishing company.
- Sethi Mohini (2005) institution food management New age international publishers.
- Knight J.B & Kotschevar LH (2000) quantity food production planning & management 3rd edition John Wiley & Sons.
- Philip E Thangam (2008) Modern Cookery for teaching and Trade Part I & II orient Longman.

SEC-B: MATERNAL AND CHILD NUTRITION

(CREDIT: THEORY 6)

THEORY

LECTURERS: 60

Objectives:

- To study the community based health and nutrition programmes for mothers and children.
- To improve the health status of mother and child.

Unit-I:

- Nutritional needs during pregnancy,
- Relationship between maternal diet and birth outcome.

Unit II: Maternal nutritional status:

- Nutritional needs of nursing mothers and infants,
- Determinants of birth weight and consequences of low birth weight,

Unit III Child feeding and care-

- Current feeding practices and nutritional concerns, guidelines for feeding, weaning and complementary feeding.
- Ongoing program me on maternal and child health

Unit IV

- Child health and morbidity, neonatal, infant and child mortality, IMR and U5MR, link between mortality and malnutrition
- Overview of maternal and child nutrition policies and programmes.

Unit V

- Common disorder during pregnancy:
- Anemia, pregnancy induced hypertension

Unit VI

- Causes and prevention of Maternal Mortality
- Issues relating to maternal health: Hemorrhage, infection, unsafe abortion

RECOMMENDED READINGS

Text Book:

- Wadhwa A and Sharma S (2003). Nutrition in the community- A Textbook. Elite publishing house Pvt Ltd New Delhi.

Reference Book

- Park K (2011). Park's textbook of preventive and social medicine, 21st edition M/s Banarasidas Bhanot publishers, Jabalpur, India.

- Bamji MS, Krishnaswamy K and Brahman GNV (Eds) (2009). Textbook of human nutrition 3rd edition. Oxford and IBH publishing Co. Pvt Ltd, New Delhi.
- National guidelines on infant and young child feeding (2006). Ministry of women and child development, Government of India.

Generic Elective Courses (GE)

Generic Elective Paper I

HUMAN NUTRITION

Objectives:

1. To gain knowledge about different nutrients, their classification, function, sources, requirement and deficiency diseases.

UNIT-1 :

Basic Concepts of Nutrition:

- Meaning and definition of Nutrients & Nutrition.
- Guidelines for good health.
- Food: Definition, Classification.
- Functions of Food- Physiological, psychological and socio-cultural. Understanding relationship between food, nutrition and health.
- Basic Food Groups: Basic four, Basic five, Basic seven and their importance.

UNIT-II:

Study of Macro Nutrients

- Classification, functions, sources, requirement and
- Deficiency diseases of Carbohydrates, proteins & fats.

UNIT-III: Study of Micro-Nutrients:

- Vitamins- Classification, functions, sources, daily requirement & deficiency diseases of Fat-soluble & Water -Soluble Vitamins – B Complex Vitamins and Vitamin C.
- Minerals: Functions, sources, daily requirement & deficiency of Iron, calcium, phosphorous, sodium & Iodine.
- Water & roughage- Functions, sources & deficiency.

UNIT IV: Nutrition during different stages of lifecycle:

- Infants,
- Preschool children,
- School going children,
- Adolescent boys and girls,
- Adult man and woman,
- Pregnant Woman and Lactating Mother.

Text Book:

1. Food & Nutrition- Educational Planning Group, Arya Publication, New Delhi.

Reference Books:

- Fundamental of food and Nutrition- by S.R.Mudambi.
- Srilakshmi B (2012) Nutrition Science 4th Revised Edition, New Age International Publishers.
- Khann K. Gupta , S. Seth R. Passi, SJ, Mahna , R. Puri S(2013) Textbook of Nutrition and Dietetics, Phonenix Publishing House Pvt Ltd.
- ICMR (2010) Recommended Dietary Allowances for Indias, Published by National Institute of Nutrition, Hyderabad
- Chadha R and Mathur P. cds (2015) Nutrition: A lifecycle Approach, Orient Blackwan, New Delhi.
- Seet V and Singh K (2006) Diet Planning through the life Cycle : Part 1 Normal Nutrition A Practical Manual, Elite Publishing House Pvt. Ltd. New Delhi.

- Gopalan C. Rama Sastri BV. Balasubramanian SC (1989) Nutritive Value of Indian Foods, National Institute of Nutrition, ICMR , Hyderabad.
- Wardlaw and Insel, MG, Insel PM (2004) , Perspectives in Nutrition, Six Edition, Mr. Graw Hill

Generic Elective Paper II

Human Development & Family Studies

Objectives:

- To know the importance of child study and about pre-natal Development.
- To understand the importance of Breast feeding and artificial feeding.
- To know the causes and consequences of infant and maternal mortality in India.

UNIT-I:

- Study of Human Development – Meaning and importance of studying human development,
- Stages of Human Development – Infancy, early childhood, late childhood, adolescence, adulthood & old age.

UNIT-II:

- Pre-natal development-
- Conception,
- Symptoms
- Complication of pregnancy.
- Different stages of pre- natal development-period of ovum, embryo & foetus.

- Factors affecting pre-natal Development –Age of the Mother, Nutrition, Drugs and Smoking, X-ray, Infection and chronic diseases of mother, Rh-incompatibility, Maternal emotional state.

UNIT-III:

- Neonatal Care – Immediate baby cleaning ,diet, temperature regulation , Daily Care of the new born baby, care of umbilicus ,care of the tongue and mouth ,massaging and exercise .
- Weaning, and care of the feeding equipment.
- Common childhood ailments -Vomiting, fever, thrush, Diarrhea, constipation Flatulence (wind), nappy rash.
- Maternal and Infant mortality - Causes and prevention

UNIT – IV:

- Family: Meaning, definition, characteristics and functions of family.
- Types of family: Nuclear and joint family, their merits and demerits, causes of disintegration of joint family.

Text Book:

1. Marriage and Family in India-K.M.Kapadia

Reference Books:

- Child Development –E.B. Hurlock
- Child Development – by K.C. Panda
- Family-Goode
- Principles of sociology – R.N. Sahrma

Generic Elective Paper III

TEXTILES

(CREDITS: THEORY-6)

THEORY

LECTURES: 60

Objectives:

- To know the manufacturing process of different types of textile fibers, their structures and uses
- To know the manufacturing process of different types of fabrics.
- To impart knowledge on different textile finishes

Unit I: Introduction to Textile Fibres

- Meaning and classification of fibres
- Source, composition, manufacturing processes and properties :
Natural fibers: cotton, flax, silk and wool

Unit II: Yarn making

- Twist in yarn-S, Z twist
- Types of yarns: Simple and novelty yarns

- **Unit III: Techniques of fabric construction**

- Parts of a loom
- Operations of a loom
- Classification of weaves (Plain, Basket, Ribbed, Twill, Satin, Sateen)- Structure, Properties, usages

Unit IV: Finishing

- Finishing-Mechanical finishes-Beetling, Calendaring, Embossing, Glazing, Napping.
- Chemical Finishes- Mercerization, waterproof and water repellent.
- Dyeing - Types of dyes

RECOMMENDED READINGS:**Text Book:**

Corbman P.B. (1985) Textiles- Fiber to fabric (6th Edition) , Gregg Division /Mc Graw Hill Book Co, US.

Reference Book:

1. Joseph, M.L. (1988) Essentials of Textiles (6th Edition), Holt , Rinehart and Winston Inc, Florida.
2. Vilensky G. (1983) Textile science, CBS Publishers and Distributors, Delhi.
3. Tortora, G. Phyllis, Understanding Textiles, Mc Millanm Co. USA.
4. Sekhri S. (2013) Textbook of Fabric Science: Fundamentals to finishing, PHI Learning, Delhi.

Generic Elective Paper -IV**FAMILY RESOURCE MANAGEMENT****(CREDITS: THEORY -6)****THEORY****LECTURES: 60****Objectives:**

- To achieve goals in life through judicious resource management
- To utilize the available resources effectively. .

Unit I: Introduction to Family Resource Management and its application

- Concept and scope of family resource management
- Processes in resource Management
- Decision Making

Unit II: Resources

- Meaning, classification and characteristics of family resources, factors affecting utilization of resources.
- Motivating factors in home management: values, standards and goals and their inter-relationship.

Unit III: Availability and management of specific resources by an individual/ family

- Money-Types of income, Supplementing family income
- Time-Concept, Factors and steps in time management

Unit IV: Availability and management of specific resources by an individual/ family

- Energy- Efforts, Fatigue, Work simplification
- Steps in successful event planning—Planning, Budgeting and Evaluating.

RECOMMENDED READINGS

Text Book

- Rao V.S and Narayana P.S., Principles and practices of management, 2007, konark publishers Pvt Ltd.
- Nickell, P and Dorsey, J.M., Management in family living, 2015, CBS Publishers and Distributors

Reference Book

- Management for Modern Families – I.H.Gross and E.W. Crandall.
- Home Management - Vergese, Ogale, Srinivasan
- Home Management – Education Planning Group, Arya publishing house, Delhi.
- An Introduction to family Resource management-Premavathy Seetharaman, Sonia Batra & Preeti Mehera
- Koontz H and O'Donnel C, 2005 Management- A System and Contingency analysis of Managerial Functions. New York: Mc Graw – Hill Book Company
- Kreiner, 2009 , Management Theory and Applications , Cengage Learning : India

HOME SCIENCE (PASS) CBCS SYLLABUS

FIRST SEMESTER

CORE-1 FOOD AND NUTRITION

(CREDITS: THEORY-4 PRACTICAL-2)

THEORY

LECTURE 60

Objectives:

- To understand basic concepts of food , nutrition and their related terms
- To study the functions, requirement& deficiency of macro & micro nutrients in the human body.
- To examine the difference between weights & measures of raw & cooked foods.
- To gain knowledge on nutritional contribution of various foods and principles involved in its cooking.

Unit I: Basic concepts in food and nutrition

- Basic terms used in study of food and nutrition.
- Understanding relationship between food, nutrition and health.
- Classification of food

- Functions of food- physiological, psychological and social.

Unit II: Nutrients

- Classification, Functions, dietary sources, daily requirement and clinical manifestations in deficiency/ excess of the following nutrients:
- Carbohydrates, Proteins and Lipids
- Fat soluble vitamins- A, D, E and K
- Water soluble vitamins- Thiamin, Riboflavin, Niacin ,Folate, Vitamin B12 and Vitamin C,
- Minerals- Calcium, Iron, Zinc and Iodine.

Unit III: Food groups

Nutritional contribution and changes during cooking of the following food groups:

- Cereal
- Pulses
- Fruits and vegetables
- Milk & milk products
- Eggs
- Meat, poultry and fish
- Fat and oils
- Spices and herbs

Unit IV: Cooking of food and enhancing the nutritional quality of foods-

- Methods of cooking- Dry, moist, frying and microwave cooking---their advantages and disadvantages.
- Enhancing the nutritional quality of foods ---Supplementation, germination, fermentation, fortification and GM foods.

PRACTICAL

1. **Weights and measures-** Raw and Cooked food (Rice .dal, chapatti, egg, seasonal vegetables)
2. **Understanding the principles involved and nutritional quality of following foods**
 - Cereals: Boiled rice, pulao, chapatti, paratha, puri, pastas

- Pulses: whole ,dehusked
- Vegetables: curries, dry preparations
- Milk and milk products: Kheer, custard

3. Understanding the principles involved and nutritional quality of the following foods.

- Baked products: Biscuits, cookies, cakes, tarts and pies
- Snacks: pakoras, cutlets, samosas ,upma, poha,and sandwiches
- Salads: salads and salad dressings.
- Fermented products : Idli, dosa, appam, kulcha, dhokla etc.

RECOMMENDED READINGS

Text Book:

- Sri lakshmi (2007) .Food science .4th edition. New age international Ltd.
- Swaminathan,M. -Essentials of Food and Nutrition. Ganesh and Company

Reference books:

- Bamji MS, KrishnaswamyK.Brahman GNV (2009). Textbook of Human Nutrition 3rd edition. Oxford and IBH publish Co Pvt Ltd.
- Wardlaw and insel MG Insel PM (2004). Perspectives in Nutrition's sixth edition Mosby.
- Chadha R and Mathur P (eds) Nutrition: a lifecycle approach. Orient Blackswan, New Delhi. 2015
- Khanna K, Gupta S, Seth R, Mahhna R, Rekhi T (2004). The art and science of cooking; a practical manual revised edition elite publishing house pvt Ltd.
- Raina U. Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S (2010). Basic food preparation -A complete manual, fourth edition. Orient black swan Ltd.

SECOND SEMESTER

CORE 2: RESOURCE MANAGEMENT
(CREDITS: THEORY -4 PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To achieve efficiency and effectiveness in life through resource management
- To utilize the available resources effectively.

Unit I: Introduction to Resource Management and its application

- Concept, universality and scope of resource management
- Steps in resource Management
- Decision Making
- Event planning and execution

Unit II: Resources

- Understanding meaning, classification and characteristics of family resources, factors affecting utilization of resources.
- Motivating factors in home management: values, standards and goals and their inter-relationship.

Unit III: Availability and management of specific resources by an individual/ family

- Money
- Time

Unit IV: Availability and management of specific resources by an individual/ family

- Energy
- Space

PRACTICAL

1. SWOC analyses
Building decision making abilities through management games
2. Preparation of time plan of a day for self and family.
3. Event planning management of a birthday party.

RECOMMENDED READINGS

Text Book

- Rao V.S and Narayana P.S., Principles and practices of management, 2007, Konark publishers Pvt Ltd.
- Nickell, P and Dorsey, J.M., Management in family living

Reference Book

- Koontz H and O'Donnel C, 2005 Management- A System and Contingency analysis of Managerial Functions. New York: Mc Graw – Hill Book Company
- Kretiner, 2009, Management Theory and Applications, Cengage Larning : India

THIRD SEMESTER

CORE 03: TEXTILES

CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To know the manufacturing process of different types of textile fibers, their structures and uses
- To know the manufacturing process of different types of fabrics.
- To impart knowledge on different textile finishes

Unit I: Introduction to Textile Fibres

- Meaning and classification of fibres
- Production, properties and usage of fibres
Natural fibre: cotton, flax, silk and wool

Man-made fibers: Rayon(Viscose)

Unit II: Yarn construction and their properties

- Yarn formation
- Mechanical spinning (cotton system, wool system, worsted system) chemical spinning (wet, dry, melt)
- Types of yarns: Staple and filament, simple yarn, complex yarns

Unit III: Techniques of fabric construction, finishing, dyeing and printing

- Parts of a loom
- Operations of a loom
- Classification of weaves (Plain, Basket, Ribbed, Twill, Satin, Sateen)- Structure, Properties, usages

Unit IV: Finishing

- Finishing-Mechanical finishes -Beetling, Calendaring, Embossing, Glazing, Napping.
- Chemical Finishes- Mercerization, Ammoniating.
- Dyeing - Types of dyes

PRACTICAL

3. Fiber identification tests- visuals, burning, microscopic
Yarn identification- single, ply, cord, textured, elastic, monofilament, multifilament and spun yarn.
4. Thread count and balance, Dimensional stability,
3. Weaves- Identification and their design interpretation on graph (any three)

RECOMMENDED READINGS:

Text Book:

Corbman P.B. (1985) Textiles- Fiber to fabric (6th Edition) , Gregg Division /Mc Graw Hill Book Co, US.

Reference Book:

- Joseph, M.L. (1988) Essentials of Textiles (6th Edition), Holt, Rinehart and Winston Inc, Florida.
- Vilensky G. (1983) Textile science, CBS Publishers and Distributors, Delhi.
- Tortora, G. Phyllis, Understanding Textiles, Mc Millanm Co. USA.
- Sekhri S. (2013) Textbook of Fabric Science: Fundamentals to finishing, PHI Learning, Delhi.

FOURTH SEMESTER

CORE 04: EXTENSION EDUCATION

THOERY

LECTURES 60

Objectives:

- To enable the student to understand the meaning, principles, philosophy of Home Science Extension Education.
- To enable the student to know about different methods used in Extension Education.
- To enrich the Knowledge of the students about teaching learning process in Extension education.

UNIT -I

Extension Education-

- Definition needs and objectives.
- Principles of extension education.
- Behavioral changes brought about by extension education.

UNIT II

Role of Extension Education in Development –

- Role of Home Science & its inter relationship with Community Development.
- Role & qualities of Home Science extension workers.

UNIT III

Methods of teaching in Extension Education-

- Individual, group & mass methods. Individual Methods: Farm and Home Visits, Office Calls, Telephone Calls, Personal letters.
- Group Methods: Method Demonstration, Result Demonstration. Group Discussion, Field Trips, Lecture, Seminars and Workshop

- Mass Methods: Leaflets, Circular Letter, Radio, T.V. Bulletins, News Articles, Their advantages & disadvantages.

UNIT IV

Teaching-Learning process-

- Meaning, principles & steps in teaching learning process.
- Criteria for effective extension teaching. Elements of teaching and learning situation.
- Criteria for effective learning. Principles of learning. Factors affecting learning.

Core paper III: Practical

Practical: 25 Marks

- Prepare posters: women empowerment, violence against women, child & maternal health issues, environmental pollution.
- Prepare a project report within one thousand words on any one of the above issues.

Text Book:

- 1.Education and communication for development – O.P. Dahama and O.P. Bhatnagar.
- 2.Extension Education and Communication–V.K. Dubey and Indira Bishnoi

Reference Books:

- Extension communication and management – G.L. Ray.
- Extension Techniques for Rural Management - C. Satapathy & Sabita Mishra.
- Extension Education – A. Reddy

FIFTH SEMESTER

DISCIPLINE SPECIFIC ELECTIVE (DSE)

DSE1: INDIAN TEXTILES HERITAGE

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES: 60

Objectives

- To study about different traditional textile and crafts of India

- To know the care and storage techniques of different traditional textile.
- To study the socio- economic significance of traditional textile and its popularity in modern India.

Unit I: Study of Textile Crafts of India: with reference to history, production centers, techniques, designs, colours and products

Woven Textiles -Benaras Brocades, Jamdanis and Baluchars of Bengal, Kani Shawls of Kashmir.

Unit II: Study of Textile Crafts of India: with reference to history, production centers, techniques, designs, colours and products

Embroidered Textiles-Kanthas of Bengal, Kasuti of Karnataka, Phulkari of Punjab, Chikankari of Uttar Pradesh, Kashida of Kashmir, Gujarat embroideries.

Unit III: Study of Textile Crafts of India: with reference to history, production centers, techniques, designs, colours and products

- Painted and Printed textiles –Kalamkaris of Andhra Pradesh, Dabu printing of Rajasthan, Ajarakh prints of Gujarat
- Dyed textiles –Bandhnis of Rajasthan and Gujarat, Ikats- Patola of Gujarat.
- Bandhas of Orissa

Unit IV. Conservation of Traditional Textile

- Evolution and Socio- economic significance of Khadi, Handloom and Handicraft sector
- Sustenance of Traditional textile crafts

PRACTICAL

4. Traditional Embroideries
5. Tie and dye
Batik
Block Printing
Stenciling
6. Visit to craft Centers.

Recommended Readings.

Text Book:

- Chattopadhyaya K.D. 1995, Handicrafts of India, Wiley Eastern Limited Delhi

Reference Book:

- Agrawal O.P. 1977 Care and Presentation of Museum Projects –II NRL
Das Shukla, Fabric Art- Heritage of India, AbhinavPublicatons N.Delhi

SIXTH SEMESTER**DSE-02 : PUBLIC NUTRITION****(CREDITS: THEORY-4, PRACTICAL-2)****THEORY****LECTURES:60**

- **Objectives:** To understand the importance of public health nutrition and its role
- To gain knowledge on different ongoing nutrition programmes.
- To study the different methods for assessment of nutritional status.

Unit 1 Concept and scope of public nutrition

- Definition, Concept and Scope of public health nutrition
- Objectives principles and scope of nutrition and health education and its promotion
- Role of Public nutritionist

Unit II: Nutritional problems and their implications

- Etiology, prevalence, clinical features and preventive strategies of Under nutrition -
- Protein energy malnutrition, nutritional anaemias, vitamin A deficiency, iodine deficiency disorders.
- Over nutrition- obesity, coronary heart disease, diabetes.
- Fluorosis

Unit III: Assessment of nutritional Status

- Objectives and importance
- Methods of Assessment
- C. Direct- Clinical signs, nutritional anthropometry, biophysical tests.
- D. Indirect- Diet Surveys, Statistics.

Unit IV -International and National Nutrition Policy and Programmes:

- International Agencies and their functions – World Health Organization (WHO),

Food and Agriculture Organization (FAO), United Nations International Children's Emergency Fund (UNICEF), Cooperatives for Assistance & Relief Everywhere (CARE).

- National Agencies and their functions , Indian Council of Agriculture (ICAR), Indian Council of Medical Research (ICMR), National Institute of Nutrition (NIN). National Institute of Public cooperation & child development (NIPCCD)

PRACTICAL

2. Assessment of nutritional status:
 - Anthropometry- weight and height measurements
 - Plotting and interpretation of growth charts for children below 5 years
2. Identification of clinical signs of common nutritional disorders.
3. Dietary assessment- FFQ and 24hour diet recall

RECOMMENDED READINGS

Text Book:

- Park K (2011) Park's Text book of Preventive and Social Medicine, 21st Edition, M/S Banarasidas Bhanot Publisher, Jabalpur, India
- Bamji MS Krishnaswamy K and Brahman GNC (Eds) (2009), Text Book of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co Pvt Ltd New Delhi,

Reference Book:

Wadhwa, A and Sharma, S (2003) Nutrition in community – A Text book, Elite Publishing House Pvt. Ltd New Delhi

Park, S K (2011) Park's Text book of Preventive and Social Medicine, 21st Edition, M/S Banarasidas Bhanot Publisher, Jabalpur, India

Bamji MS Krishnaswamy K and Brahman GNC (Eds) (2009), Text Book of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co Pvt Ltd New Delhi,

Jeliffe, D.B, Jeliffe, ERP, Zarfar A and Neumanan, CG(1989) Community Nutritional Assessment with special reference to less technically developed countries, Oxford University Press Oxford.

World Health Organization (2006) WHO Child growth Standards. Methods and development, length/height for age, weight of age, weight-for length , weight for height and body mass index for age ([http:// who.int/child growth/standards/en/](http://who.int/child-growth/standards/en/))

GENERIC ELECTIVES (GE)

GE 1: HUMAN NUTRITION (CREDITS: THEORY 6)

THEORY

LECTURES:60

Objectives

- To understand the relationship between food, nutrition and health.
- To understand the importance of food and nutrition in different life stages.

unit-1 : Basic Concepts in Nutrition

- Basics terms used in nutrition
- Understanding relationship between food, nutrition and health
- Functions of Food- Physiological, psychological and social
- Basic food groups and concept and balanced diet.

Unit II: Nutrients

- Functions, Recommended Dietary, Allowances, dietary sources, effect of deficiency and or excess consumption on health of the following nutrients.
- Carbohydrates and dietary fiber
- Lipids
- Proteins
- Fat soluble vitamins- A,D,E, and K
- Water soluble vitamins- Thiamin, Riboflavin, Niacin, Pyridoxine, Folate, Vitamin B 12 and Vitamin C
- Minerals- Calcium, Iron, Zinc and Iodine

Unit III: Nutrition during lifecycle

Physiological considerations and nutritional concerns for following life stages.

- Adult Man/ Woman
- Preschool children
- Adolescent Children
- Pregnant Woman

Nursing Woman and infant

RECOMMENDED READINGS

Text Book:

- Srilakshmi B (2012) Nutrition Science 4th Revised Edition, New Age International Publishers.

Reference Book:

- Wardlaw and Insle, MG, Insel PM (2004), Perspectives in Nutrition, Six Edition, McGraw Hill
- Khann K. Gupta, S. Seth R. Passi, SJ, Mahna, R. Puri S (2013) Textbook of Nutrition and Dietetics, Phonenix Publishing House Pvt Ltd.
- ICMR (2010) Recommended Dietary Allowances for Indias, Published by National Institute of Nutrition, Hyderabad
- Chadha R and Mathur P. cds (2015) Nutrition : A lifecycle Approach, Orient Blackwan, New Delhi.

SKILL ENHANCEMENT COURSES (SEC)

THIRD SEMESTER

SEC-A : HOME BASED CATERING

(CREDITS: THEORY 2)

THEORY

LECTURES:60

Objectives:

- To know different type food service unit.
- To study the different-step towards planning and execution of food service un

Unit I: Introduction to food service

- factors contributing to the growth of food service industry

- kinds of food service establishments

Unit II: Food production

- Menu planning importance of menu, factors affecting menu planning, menu planning for different kinds of food service units
- Food purchase and storage
- Quantity food production: Standardization of recipes, quantity food preparation techniques, recipe adjustments and portion control
- Hygiene and sanitation

Unit III: Resources

- Money
- Manpower
- Time
- Facilities and equipment
- Utilities

Unit IV: Planning of A food service Unit

- Preliminary planning - Survey of types of units, identifying clientele, menu, operations and delivery

RECOMMENDED READINGS:

Text Book:

- Sethi Mohini (2005) institution food management New age international publishers.

Reference Book:

- West B Besie & Wood Levelle (1988) Food service in institutions 6th Edition revised By Hargar FV, Shuggart & Palgne Palacio June, Macmillian publishing company.
- Knight J.B & Kotschevar LH (2000) quantity food production planning & management 3rd edition John Wiley & Sons.
- Philip E Thangam (2008) Modern Cookery for teaching and Trade Part I & II orient Longman.
- Taneja S and Gupta SL (2001) Entrepreneurship development, Galgotia publishing.

FOURTH SEMESTER

SEC-B: MATERNAL AND CHILD NUTRITION

(CREDIT: THEORY 2)

THEORY

LECTURERS: 30

Objectives:

- To improve utilization of community based health and nutrition for pregnant women and children.
- To improve the health status of mother and child.

Unit-I

- Nutritional needs during pregnancy, common disorder of pregnancy (Anaemia, HIV infection, pregnancy induced hypertension), relationship between maternal diet and birth outcome.
- Maternal health and nutritional status, maternal mortality and issue relating to maternal health.

Unit-II

- Nutritional needs of nursing mothers and infants determinants of birth weight and consequences of low birth weight, breastfeeding support and counseling.

Unit-III

- Infant and young child feeding and care- current feeding practices and nutritional concerns, guidelines for infant and young child feeding, Breast feeding, weaning and complementary feeding.
- Assessment and management of moderate and severe malnutrition among children, Micronutrient malnutrition among preschool children.
- Child health and morbidity, neonatal, infant and child mortality, IMR and U5MR, link between mortality and malnutrition.

Unit-IV

- Overview of maternal and child nutrition policies and programmes.

RECOMMENDED READINGS

Text Book:

- Park, (2011). Park's textbook of preventive and social medicine, 21st edition M/s Banarasidas Bhanot publishers, Jabalpur, India.

Reference Book:

- Wadhwa, A. and Sharma, S. (2003) . Nutrition in the community- A Textbook. Elite publishing house Pvt Ltd New Delhi.
- Bamji, M.S, Krishnaswamy, K and Brahman, GNV (Eds) (2009). Textbook of human nutrition 3rd edition. Oxford and IBH publishing Co. Pvt Ltd, New Delhi.
- National guidelines on infant and young child feeding (2006). Ministry of women and child development, Government of India.

FIFTH SEMESTER**SEC – C: SELF DEVELOPMENT AND WELL-BEING****(CREDITS: PRACTICAL -6)****PRACTICAL**

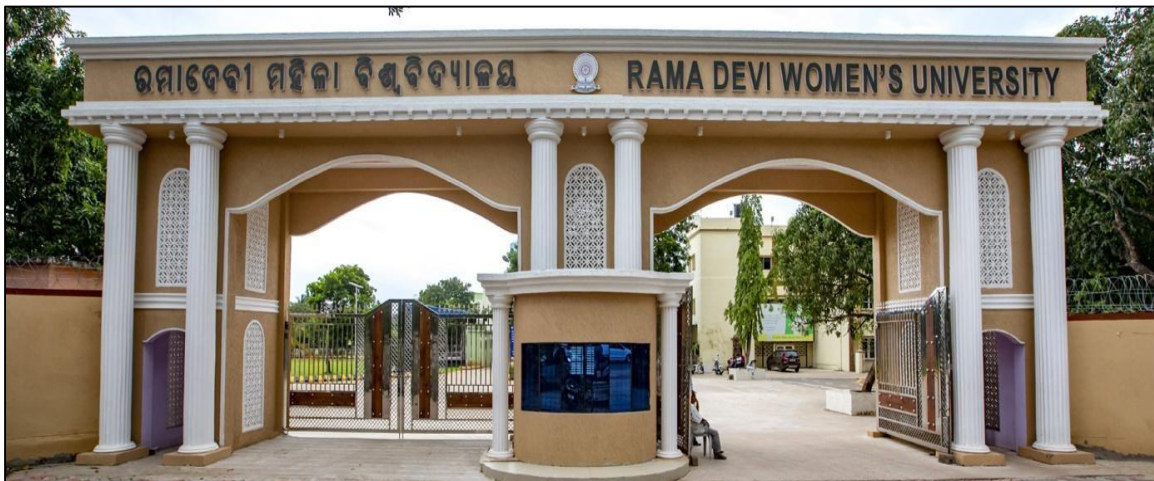
1. Understanding the self – Theatre approach
2. Interview of two adolescents – 1 male, 1 female, about his/ her sense of self
3. An exercise In self-reflection from early childhood to adolescence
4. Case profile of an adolescent
5. Workshop on self – development
6. Analyzing images in media to understand the self
7. Organize small group discussions to arrive at indicators of self of well- being
8. Learning about assessment of well-being using a standardized test

RECOMMENDED READINGS

- Kakar, S. (1978). The inner world. Delhi: Oxford University Press
- Kakar, S. and Kakar, K (2007). The Indian: The portraits of a people. London: Penguin/Viking.
- Rice, F.P. (2007). Adolescent: Development, Relationship and Culture.
- Santrock, J. (2010). Life Span Development: A Tropical Approach, New Delhi: Tata McGraw Hill.

DEPARTMENT OF HOME SCIENCE

SYLLABUS OF PG PROGRAMME (M.Sc.)



RAMA DEVI WOMEN'S UNIVERSITY
Vidya Vihar, Bhubaneswar-751022, Odisha
Website: <https://rdwu.ac.in>

SYLLABUS

MASTER OF SCIENCE (M. Sc.)

in

HOME SCIENCE

(CHOICE BASED CREDIT SYSTEM)

2022-24



RAMA DEVI WOMEN'S UNIVERSITY
Bhoi Nagar, Bhubaneswar, Odisha – 751022, INDIA
<https://www.rdwuniversity.nic.in>

M. P. Patil
12.10.23
Controller of Examinations
R.D. Women's University
Bhubaneswar

Rama Devi Women's University, Bhubaneswar, ODISHA

The Course of Studies for Master's Degree in Home Science (M.Sc.) under Choice Based Credit System Effective from the 2022-2024 Academic Session onwards

The syllabus is designed on Choice Based Credit System in accordance with the guidelines provided by the University Grants Commission. The syllabus of Master of Home Science is full time two years programme with four semesters. The duration of each semester is of 16-18 weeks, and the teaching hours per semester is 103 hours. The uniform nature of credits specified for the Master's Programme describe the equitable weightages of various courses of the programme. The number of credits along with grade points that a student satisfactorily completed, measures the performance of the student. Satisfactory progress and completion of course are subject to a student's maintaining of a minimum Cumulative Grade Point Average (CGPA), as well as minimum grades in different subjects of the programme. Description and layout of Credit Distribution for the Course programme is detailed below:

- 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) $14 \times 5 = 70$ credit points

Core Elective Papers(CE) -04 (Subject specific/ special/advanced course with choice Departmentally) $4 \times 5 = 20$ credit points

Allied Core Papers (AC) – 02 (course offered by the department for same or allied discipline within the same school) $3 \times 2 = 06$ credit points

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

Field Internship(FI)-01 (3rd semester) $3 \times 1 = 03$

- 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**

RDWU PG SYLLABUS 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

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 OR D) Ergonomics OR E) Clothing Standards and Specifications	5	5	30	70	100
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

Summary Structure

HC-Hard Core	14 x 100	1400
CE-Core Elective	4 x 100	400
OE-Open Elective	1 x 50	50
AC-Allied Core	2 x 50	100
FI-Field Internship	1 x 50	50
Total Marks:		2000

Summary Semester wise

Semester	Credits	Total Marks
Sem-I	23	450
Sem-II	29	550
Sem-III	28	550
Sem-IV	23	450
TOTAL	103	2000

Instructions to the Board of Studies:

1. Program Outcome for each program/discipline/subject must be given
2. Each paper/course must have objectives and learning outcomes
3. Each theory paper must have five (05) units
4. Each unit must have three (03) components.
5. Each practical paper must include minimum eight (08) experiments/tests.

Programme Outcome

The students will be able to

PO-1-Learning and conceptual understanding

Understand the concepts and application of Food sciences and Nutrition , Human Development , Resource Management , Textile and Clothing for community developments.

PO 2-Applicability- Apply the knowledge of decisions making in management and problem solving ability.

PO-3- Skill Enhancement- Skilled areas in Nutrition and Dietetics, Resource Management, Textiles and Extension Education.

PO-4- Innovation-Enable the students to prepare new projects and proposal making.

PO-5- Environment and Sustainability-Develop skill of designing, testing attitude, motivation and emotional intelligence and learn there use of sustainable practices for improved physical, emotional, social, psychological environment at micro/macro level.

PO-6-Entrepreneurial Skill-Ability to learn the entrepreneurial qualities and also inculcate the abilities of employability .

PO-7-Home Science and Society –Understand the process of programme designing and apply the knowledge, identify, analyze the societal issues to improve quality of life of individual, family and society.

PO-8- ICT Skills-Develop ability in planning, implementation and using of communication Technology

PO-9-Exposure Learning-Acquired practical learning from internship, field visits , industrial visit and research projects.

PO-10- Research aptitude-Understanding basics of computer will help to analysis the data , computing the data and presenting the data with statistical applications.

Programme Specific Outcome

PSO1- Acquire practical knowledge through Field internship visits to industries and research organizations.

PSO2- Develop research eco-system in the teaching learning environment.

PSO3- Inculcate professional attitude and aptitude among the learners to broaden their vision.

PSO 4- Create opportunity for employability through need based courses as per industry requirement.

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

Hard Core Paper –1 -Advance Food Science and Nutrition

- **Course Outcome**
- **CO 1 :** The students will get to know about the basic food groups, food preparation and meal planning.
- **CO 2 :** Emphasize the need of different Foods and food products and study about the new trends in foods.
- **CO 3 :** This course enables a detailed study on Carbohydrates, Proteins and Fats.
- **CO 4 :** To provide knowledge about functions, sources and requirements of various vitamins and minerals.
- **CO 5 :** The students will gain knowledge on RDA, BMR and emerging and changing concepts in Human Nutrition

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.

Unit-II:

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, Need for convenience foods. New trends in foods.

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 calorimetric and Indirect calorimetry, Resting energy expenditure, Factors effecting Physical activity, Factors affecting Basal metabolic Rate,.
- Emerging Concepts in Human Nutrition, Ongoing nutrition transition and its implications. Changing trends in life style patterns in population groups and their implications.

Books for References:

- Davidson S.R. Passmore, J.F. Brock and A. Traversill Human nutrition and Dietetics, English language book society and Churchill Livingstone 1975.
- N. Shakuntala many ana M. Shadaksharaswamy, New age International publication Food facts and principles.
- Robinson C.H : Normal and Therapeutic Nutrition memillan and Co.
- Sukla P.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 Rehena: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

Hard Core:Paper-102HumanDevelopment

Course Outcome

CO 1 : To acquire knowledge about the principles and theories of Human development.

CO 2 : To Understand Biological basis of development.

CO 3 : To highlight the need of the Developmental task during Infancy and Early Childhood years.

CO 4 :To acquire detailed knowledge on Developmental changes during the transition phase from late childhood to Adolescence.

CO 5 :To mark the difference in Developmental task during Adulthood and Oldage.

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 and Ecological theory of Uri Bronfenbrenner.

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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	1	5	5	4	5	2	4	2	2
CO2	1	1	2	5	1	1	5	5	1	1
CO3	1	1	2	5	1	1	5	1	1	1
CO4	1	1	5	1	1	5	1	1	1	1
CO5	1	1	5	5	1	5	1	1	1	1

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

Hard Core- HC-103 – Extension Education

Course Outcome

- **CO 1** : The students will learn about extension education, its philosophy and conceptual framework of extension education.
- **CO 2** : This will enable students to gain knowledge about programme planning and evaluation processes/ cycles.
- **CO 3** : The students will become familiar with various Home Science extension programmes.
- **CO 4** : At the end of this unit, the students will know about principles of teaching and learning.
- **CO 5** : The students will be able to understand about different aspects of Adult Education.

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, Law of prepotency of elements, Law of response by analogy) .

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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1	4	1	5	5	1	1	1	5	1
CO2	1	1	1	5	1	1	5	5	1	2
CO3	1	1	5	1	1	5	1	1	5	1
CO4	1	4	1	1	5	1	5	1	1	1
CO5	5	1	1	1	1	1	5	5	5	1

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

Hard Core:Paper104- Integrated Practical

Course Outcome

CO 1 : The students will get expertise in menu planning for different stages of human life.

CO 2 : The students will become skill ful on preparing menus on special conditions on the basis of different socio-economic groups.

CO 3 : The students will understand the behavioural pattern and changes in childhood and adolescence.

CO 4 : The students will become familiar with different case studies related to early and late adolescent issues.

CO 5 :The students will get exposure on field situations, report preparation and presentation.

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

- Plan a day’s menu during Infancy, Preschool, School going(Packed Lunch),Adult Man/Woman Adolescence., Old age of different socio-economic groups. Calculate nutritive value, prepare and serve the menu
- Plan a menu on Special Condition-Pregnancy / Lactation of different 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 its effective delivery.
- Organize and evaluate programmes related to women and children at urban slum/rural area.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	5	5	4	2	5	2	1	5	1
CO2	4	5	5	4	1	1	2	1	5	1
CO3	4	5	5	5	2	4	2	1	5	1
CO4	4	5	1	5	2	1	5	1	5	1
CO5	4	5	1	5	1	1	2	1	5	2

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

Hard core-201- Resource Management

Course Outcome

CO 1 :The students will be able to understand the significance of motivating factors applied in household management.

CO 2 : The students will gain knowledge about skillful management of family resources.

CO 3 : The students will become familiar with the energy demand, energy management techniques and work simplification.

CO 4 : At the end of this unit, students will be aware about the concept of income, types of income and expenditure and different account keeping pattern in households.

CO 5 : The students will understand the importance of space management.

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 Candle
- 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

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	4	5	1	2	1	5	1	2	2
CO2	5	4	4	5	2	1	5	1	2	2
CO3	5	4	1	1	2	5	5	1	2	2
CO4	5	4	5	1	2	5	5	1	2	2
CO5	5	4	5	5	2	1	1	1	5	2

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

Hard core-202- Textile and Clothing

Course Outcome

CO 1 : The students will be enabled to learn the basics of textile fibres- construction, sources and composition.

CO 2 : The students will learn about the manufacturing of different textile fibres and its different physical and chemical properties.

CO 3: The students will be aware about yarn formation, parts of a loom, classification of weaves.

CO 4: The students will be able to understand about the clothing for the family and factors affecting its selection.

CO 5: Students will gain knowledge on consumer problems and guidelines, for selection of clothing.

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,tri-acetate),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, , knot 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.
&Gaurav Garg

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	4	5	4	2	1	2	1	2	2
CO2	5	4	1	2	2	5	2	2	2	2
CO3	5	4	5	2	2	5	2	1	2	1
CO4	5	5	1	2	2	1	2	2	2	1
CO5	5	4	2	5	2	1	2	1	5	2

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

Hard core-203- Research Methodology and Statistics

Course Outcome

CO 1: The students will gain knowledge on Research and Research design.

- CO 2:** The students will learn about different sampling designs and data collection methods.
- CO 3:** The students will be about to understand about the data classification and its different types.
- CO 4:** The students will gain basic ideas on data tabulation.
- CO-5 :** The will gain knowledge on data interpretation and report writing.

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 reseeding, developing a research plan.

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 and schedules (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
- Parametric and non parametric tests(t test, Chisquaretest, correlation)

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

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	4	2	5	2	2	5	2	5	1
CO2	4	2	2	5	1	2	5	2	5	1
CO3	4	2	2	5	5	2	5	2	5	4
CO4	4	4	4	5	1	2	1	2	5	5
CO5	4	2	2	5	4	4	1	1	5	5

Hard Core Paper- 8

Integrated Home Science (Practical -2)

100 Marks, Credits-5

Mid Sem (1 Hr) 230+ End Sem (3Hrs) 70 marks

I class =1 hour

Hard core-204- Integrated Practical

Course Outcome

- CO 1:** The students will get in-depth knowledge in skillful management of family resource.
- CO 2:** The students will gain knowledge to prepare the layout of different types of kitchens.
- CO 3:** The students will gain exposure to a textile industry to get practical knowledge.
- CO 4:** The students will become aware of documentation of traditional and modified textile designs.
- CO 5:** The students will understand the techniques of tracing information from different reference sources.

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 fiber to fabrics. Submit a report.
- Printing of fabrics using: Direct style - block, stencil and screen ii. Resist style - Tie &Dye, Batik
- 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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	4	5	4	2	5	2	2	1	5
CO2	2	4	5	2	2	1	1	2	5	5
CO3	2	4	2	5	5	5	2	2	5	5
CO4	5	4	2	2	2	1	1	2	5	5
CO5	2	4	2	2	2	1	5	2	5	5

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

Core Elective-201 (A)- Advanced Human Development

Course Outcome

CO 1 :The students will gain knowledge about theories of human development and its critical analysis..

CO 2 : The students will be able to understand the critical analysis of theories of human development and its application.

CO 3 : The students will be familiar with different adjustment skills of different phases of life.

CO 4 : The students will understand about adjustments during middle hood and its hazards.

CO 5 : The students will gain knowledge about old age adjustment and legal and welfare measures for elderly .

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 D development and Personality- Mussen, Congere, Kangan
- 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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	5	2	1	4	2	5	1	5	4
CO2	5	5	2	1	5	2	4	1	2	4
CO3	4	4	5	1	1	2	5	1	2	1
CO4	4	4	5	2	1	1	5	1	1	1
CO5	4	4	5	1	1	2	5	1	5	1

Core Elective Paper-1(B)**Rural Development****100 marks ,Credits-5: Lectures: 50 hours****Mid Sem(1 Hr) 30+ End Sem(3Hrs) 70 marks****1 class =1 hour****Core Elective – 201(B)- Rural Development****Course Outcome:**

CO 1 : The students will have in depth knowledge on Rural sociology, socialization, social changes and social institution.

CO 2 : The students will be familiar with basic rural institutions, cooperative societies and village schools and its activities.

CO 3 : The students will be associated with different Rural Development programmes currently going on.

CO 4 : They will have an insight on Rural Youth Service Schemes and Rural Youth Social profile and clubs.

CO 5 : At the end of this Unit the students will be able to understand the role of Rural Women and about their empowerment.

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 Sadak Yojana (PMGSY)
- Deen Dayal Upadhyay Gramin Kausal Yojana (DDYGKY)
- National Rural Health Mission (NRHM)
- Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
- Pradhan Mantri Awas Yojana (PMAY)
- Swach Bharat Mission
- Sanshad Adarsha Gram Yojana

- P.M. Ujala Yojala
- Samagra Sikshya Abhijan (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

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	4	4	5	2	2	5	1	4	2
CO2	4	2	4	4	5	2	4	2	4	2
CO3	4	2	4	2	2	5	4	1	5	2
CO4	4	4	2	2	2	5	5	1	5	2
CO5	4	4	2	2	2	2	5	5	5	2

Nutrition through Life Span

100 marks Credits-5: Lectures: 50 hours

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

1 class =1 hour

Core Elective – 201(C)- Nutrition Through Life Span

Course Outcome:

CO 1 : The students will gain knowledge about the Special Nutrition during pregnancy and Lactation.

CO 2 : The students will become aware of growth and development, Nutritional requirements and feeding problems associated with Infancy.

CO 3 : The students will be familiar with Nutritional requirement for Pre- school and School-going children.

CO 4 : The students will understand about the Nutritional Requirements, Food requirements and low-cost balanced diet for adolescents and adults.

CO 5 : The students will gain knowledge an insight on Geriatric Nutrition.

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

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

Core Elective – 201(D)-Housing and Interiors

Course Outcome

CO 1 : The students will gain in-depth knowledge on history of housing, changes in housing needs and standards and housing trends in India.

CO 2 : The students will be aware of present housing conditions in India and housing management problems.

CO 3 : The students will understand various factors affecting housing and housing standards and housing legislations.

CO 4 : The students will be familiar with basic building materials and finishes and the various factors influencing housing design cost.

CO 5 : The students will have idea on different type of housing services, housing research and development.

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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	2	1	5	5	4	2	1	2	1
CO2	4	5	5	1	1	4	2	1	2	1
CO3	4	2	5	1	1	4	2	1	2	1
CO4	4	2	5	1	1	4	2	1	2	1
CO5	4	2	1	1	1	4	2	1	2	5

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

Core Elective – 201(E)- Advanced Textile Processing

CO 1 : The students will gain knowledge on classification of various dyes and its uses for different fibres.

CO 2 : The students will understand about the application of dyes, several methods of dyeing and various dyeing defects.

CO 3 : The students will gain expertise on several printing methods.

CO 4 : The students will be aware of preliminary treatment in finishes and about mechanical and chemical finishes.

CO 5 : At the end of this unit, the students will learn about the special finishes and finishing processes for functional effects.

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, Schreinerer, 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.
- BurkhardWulfhorst, Thomas Gries,DieterVeit., (2006), Textile Technology Hanson Gardner Publications,Germany.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	4	5	2	1	5	2	1	4	2
CO2	4	4	5	2	1	5	2	1	4	2
CO3	4	4	5	2	5	5	2	1	4	2
CO4	4	4	5	2	1	5	2	1	4	2
CO5	4	4	5	2	1	5	2	1	4	2

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

Open Elective-201- Nutrition across life cycle

Course outcome

- **CO 1** :The students will have the in-depth idea about nutrition during infancy.
- **CO 2** : The students will gain knowledge on Nutrition during early Childhood.
- **CO 3** : The students will become aware of nutrition during old age.
- **CO 4** : The students will understand the Nutrition during Adolescents.
- **CO 5** : The students will gain expertise degenerative diseases and dietary guidelines.

UNIT-I

Nutrition during Infancy:

- Growth and Development 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):

- Growth and development

- Nutritional requirements
- Food Requirement- Dietary Guidelines
- Nutrition related problems

UNIT-III

Nutrition during Adolescence:

- Growth and development
- 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-Premlata Mallick
- 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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	2	5	1	2	5	4	1	4	1
CO2	4	2	5	1	2	5	4	1	4	1
CO3	4	2	5	1	2	5	4	1	5	1
CO4	4	2	1	1	2	5	4	1	4	1
CO5	4	2	5	1	2	5	4	1	2	2

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

Hard Core- 301-Family Sociology

Course Outcome-

- **CO 1** : The students will be able to gain knowledge on theories of family and types of family.
- **CO 2** : The students will be able to familiar with marriage and Family life cycle and crisis in different stages life.
- **CO 3** : At the end of this unit student will be able to understand about the changes in family structure and contemporary issues of family.
- **CO 4** : The student will be aware of different elements and types of Family relationship.
- **CO 5** : The students will gain in depth knowledge on Family welfare Policy, Laws and Programmes.

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

- Theories of Family - Developmental theory, Conflict theory, System 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, Mumbai.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	5	2	2	2	4	5	1	1	4
CO2	5	4	2	2		5	5	1	1	4
CO3	5	4	2	2	2	5	4	1	2	1
CO4	5	4	5	2			4	1	2	2
CO5	5	-	2	2	5	5	5	1	2	1

Guidance and Counseling

100 marks, Credits-5: Lectures: 50 hours

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

1class= 1 hour

Hard Core- 302- Guidance and Counselling

CO 1 : The student be able to understand about the concept, types and theories of guidance counselling.

CO 2 : The student will gain expertise on techniques of counselling, behavioural therapy and types of counselling.

CO 3 : The student will be aware of different areas of counselling.

CO 4 : The student will have in depth knowledge on various aspects of Guidance services.

CO 5 : The student will be able to gain experience on vocation Guidance and Counselling.

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, systematic desensitization, 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 other socio-metric 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 and area.

Unit – IV: Guidance services:

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

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	4	1	2	4	4	5	1	2	2
CO2	4	1	5	2	5	1	4	2	2	2
CO3	4	4	5	2	5	1	4	2	2	2
CO4	4	4	5	2	5	1	4	2	2	2
CO5	4	4	5	1	5	5	1	2	2	2

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

Hard Core- 303- Integrated practical

Course Outcome

CO 1 : The student will be aware of how to prepare a report on the issues of female headed families.

CO 2 : The student will gain expertise on analytical report writing on contemporary issues of families.

CO 3 : The student will have exposure visit to a family counselling centre.

CO 4 : The student will learn to prepare a case study.

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 Counseling (Marks-50)

- Visit to a family counseling center and prepare a report
- Prepare a case study report on counseling centre in an educational set up

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	4	2	2	4	4	2	2	4	5
CO2	2	4	2	2	2	1	2	2	5	5
CO3	2	2	2	2	2	5	2	2	1	1
CO4	2	4	2	2	2	1	2	2	5	1

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

Core Elective -301 A- Early childhood care and education

Course Outcome:

- CO 1 : The student will be able to understand about the early childhood and child rearing practices.
- CO 2 : The student will be aware about the care and Education in Early Childhood.

- CO 3 : At the end of this unit student will gain knowledge on pre-school program planning and activities.
- CO 4 : The student will be able to familiar with preschool administration and home school relationship.
- CO 5: The student will be able to learn techniques of studying children.

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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	2	4	2	2	2	2	2	5	2
CO2	4	2	5	5	2	4	2	2	2	2
CO3	4	4	4	2	2	2	5	1	1	4
CO4	2	2	4	2	2	5	2	2	5	2
CO5	4	2	4	2	4	5	2	2	5	2

Core Elective Paper-2(B)

Community Development & Project Management

100 marks Credits-5: Lectures: 50 hours

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

1 class =1 hour

B- Community development and project Management

Course Outcome:

CO 1: The students will be able to learn about the community development, its process and various CD programme.

CO2: The students will gain knowledge about administration and units of organization.

CO3- The students will be aware about coordination , techniques of coordination and machinery for coordination.

CO4- The students will be able to familiar with project management skills .

CO 5- The students will gain knowledge about evaluation process of extension education

Unit I

- Community development: Origin, definition, nature of community development, Community Development as a process, Community Development as a method, Community Development as a programme, Community Development as a movement, Community Development as a new institution of a government, Community Development 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 & Sabita Mishra.
- Education and communication for development–byO.P.Dahama and O.P. Bhatnagar.
- Extension Education – A. Reddy.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	2	5	5	4	2	4	2	5	5
CO2	4	4	1	1	4	2	1	1	5	2
CO3	2	2	4	5	1	2	2	2	5	2
CO4	2	4	1	5	2		2	1	5	5
CO5	4	2	1	1	2	5	2	2	1	2

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

Core Elective Paper-2(C- Nutritional Biochemistry

Course Outcome:

- CO1- The students will be able to understand the process of carbohydrate metabolism.
- CO2- The students will gain some idea about overall protein metabolism.
- CO3- The students will be able to learn the steps involve in lipid metabolism.

- CO-4- The student will be able to be familiar with the energy metabolism and measurement of energy requirement.
- CO-5-The student will gain better understanding on macro and micro nutrient metabolism.

Unit-I: Carbohydrate Metabolism

- Nutritional Importance of Carbohydrates: definition, classification, structure, & function.
- Digestion, Absorption, and Metabolism of carbohydrates,
- Blood sugar level & equilibrium.

Unit-II: Protein Metabolism

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

Unit-III: Lipids

- Nutritional Importance of Lipids: definition, importance fatty acids, structure, classifications & types of lipids,
- Importance of lipoprotein, Digestion, absorption,
- Transport and 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 and Macro Nutrients

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

Reference Books :

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 Chatterjee & Rana Shinde, Jaypee Brothers, Medical Publishers (P) Ltd Bangalore.
4. Fundamentals of Biochemistry – J.L. Jain, S. Chand & Company Ltd, Ram Nagar,

NewDelhi.

- Human Physiology Vol I – C.C.Chaterjee, Medical Allied agency, Mahatma Gandhi Road,Calcutta.
- Human Nutrition & Dietetics – Davidson &Passmare
- Lehninger’s Principles of Biochemistry-D.L.Nelson&M.M.Cox, Macmillan WorthPublishers.
- A manual of Laboratory techniques-Raghuramulu, N. Madhavan Nair and K.KalyanSundaram – NIN, ICMR.
- Harpers Biochemistry- R.K.Murray, D.K.Granner, P.A. Mayes, V.W.Rodwell-Mac millan Worth Publishers
- Text Book of Biochemistry with clinical correlation T.M.Devlin-Wiley Lissinc.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	2	5	1	1	5	1	1	5	1
CO2	2	2	5	1	1	5	2	2	5	1
CO3	2	2	5	1	1	5	1	1	5	1
CO4	4	2	5	1	1	5	2	1	5	1
CO5	4	1	5	1	1	5	1	2	5	1

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

Core Elective Paper-2(D- Enterprise Management

Course Outcome:

- CO 1- The student will be able to aware about the concept need, process and types of entrepreneurship development.
- CO2- The student will be able to learn about entrepreneurial motivation, developing entrepreneurial competencies and factors affecting entrepreneurs role.
- CO3- The student will gain expertise in in launching and organizing an enterprise.
- CO4-The student will able to learn about enterprise networking.
- CO-5-Indepth knowledge in evaluating and controlling market performance.

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 Cnceptual 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 Cnceptual 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 H

Mapping of Course Outcome with the Programme Outcome

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	2	2	4	5	5	2	1	4	4
CO2	4	2	2	5	5	5	2	1	5	5
CO3	4	4	2	4	5	5	2	1	5	4
CO4	4	2	2	5	5	5	2	1	4	2
CO5	4	2	2	4	5	5	2	2	5	2

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

E- Textiles Economics and Marketing

Course Outcome:

CO 1- The students will able to gain some knowledge on Indian Textile Industry , its contribution in Indian economy , different policies and problems associated with it.

CO2- The student will be able to familiar with various sectors of textile industry , handloom and it's importance and about technical textiles in Indian Market.

CO3- The student will be aware of different textile associations and organizations across the globe.

CO4- The student will be able to have an idea about Indian textile market and various export promotion council.

CO5-The students will be able to learn about market research on Indian textile industries.

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.
- NirupamaPundir,(2007) Fashion Technology Today and Tomorrow, Mittal Publications, New Delhi.
- ManmeerSodhia and PoojaChately,(2003) Fashion Marketing and Merchandising, Kalyani Publishers, New Delhi,2003.
- R.Nandagopalet 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
- MausumiKar (2015) The Indian Textile and Clothing Industry-An EconomicAnalysis, Springer Publications, NewDelhi
- Prashant P. Deshpande (2009) Garment Export Industry Of India, APH Publishing NewDelhi

- AparajitaChowdhury, Gyana publishing House ,New Delhi.
- Family life Education in India: Perspectives, Challenges and Applications- edited book by Dr AparajitaChowdhury David k .Carson, Cecylek . Carson.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	5	2	1	4	2	4	2	4	4
CO2	5	4	2	2	5	2	1	2	5	2
CO3	5	5	2	2	4	2	4	2	4	1
CO4	5	4	2	2	5	2	4	2	4	4
CO5	2	5	2	1	5	2	2	2	5	5

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

Core- Elective Paper 3 (A) – 302

Course Outcome:

- **CO1-** The student will understand about the exceptional children and their classifications.
- **CO2-** The students will gain an in-depth knowledge on socially handicapped children, Emotionally disabled children and orthopedically challenged children.
- **CO3-**The students will gain knowledge about children with speech defects and gifted children.
- **CO4-**The students will be aware of about the status and situations of differently abled children and adolescents in India.
- **CO5-** The student will learn about the different welfare programmes and policies for disabled children and adolescents in India.

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

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	1	2	1	5	5	1	1	5	1
CO2	1	5	1	1	5	1	2	1	5	1
CO3	2	1	1	1	5	5	1	1	5	1
CO4	2	4	1	1	1	1	1	1	5	1
CO5	1	1	1	1	5	5	1	1	5	1

Core Elective Paper-3(B)

Communication in Extension Education

100 marks ,Credits-5: Lectures: 50 hours

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

I class =1 hour

B- Communication in Extension Education

Course Outcome:

- **CO1-** The students will be able learn about the communication, the process of communication and factors affecting the communication.
- **CO2-** The students will acquire some knowledge on elements of communication and several models of communication.
- **CO3-** The students will be aware about the individual , group and mass approaches of communication.
- **CO4-** The student gain some exposure about various audio visual aids.
- **CO5-** The students will be able to understand about the importance of feedback in communication process.

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, Shammon – 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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	2	1	1	5	1	5	5	5	1
CO2	4	2	1	1	5	1	5	5	5	1
CO3	4	4	1	1	5	1	5	5	5	1
CO4	4	1	1	1	5	1	5	5	5	1
CO5	2	2	1	1	5	1	5	5	5	1

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
1 class =1 hour

C-Food Microbiology and Food safety

Course Outcome:

CO1- The student will get an idea about food components.

CO2- The student will learn about the nuts, Milk and Milk products, Sugar, spices and beverages.

CO3- The students will be familiar with properties of pigments, Additives and Enzymes present in food.

CO4- The student will be able to aware about food sanitation, spoilage and Toxicology.

CO-5- The student will be understand about the food quality and food adulteration.

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, Bread, Canned food, Vegetables and fruits, Fruit juices, 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, Campylobacter jejuni, Yersinia enterocolitica, 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 for Reference:

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

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	1	5	1	1	5	5	1	5	2
CO2	2	1	5	1	1	5	5	1	5	4
CO3	4	1	5	1	1	5	5	1		4
CO4	4	1	5	1	1	5	5	1	5	4
CO5	2	1	5	1	1	5	5	1	5	2

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

Course Outcome :

CO1-The students will gain knowledge about the scope of ergonomics and interdisciplinary and applied nature of ergonomics.

CO2- The student will learn about the physiological aspects of work.

CO3- The student will be able to aware about energy management and factor affecting muscular activity.

CO4- The students will be able to learn the skill about Anthropometry and biomechanics measurement.

CO5- The student will be able to get an idea about Engineering psychology

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 an Francis, London
- Ergonomics Methodology, Taylor and Francis, London
- Pheasant Stephan (2001): Body Space, Anthropometry, ergonomics and the Design

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	1	1	4	1	1	5	4	5	2
CO2	4	1	1	2	1	1	4	5	5	2
CO3	4	1	1	4	1	1	5	5	5	2
CO4	4	1	1	2	1	1	4	5	5	2
CO5	4	1	1	4	1	1	5	4	5	2

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:

Course Outcome:

Co1- The student will be skilled on stitching procedure of seam and seam finishes, pleats and fasterness in common use.

CO2- The student will be able to aware about various sleeves, collar, Neckline finishes and Tucks.

CO3- The student will be able to familiar with the quality standards , standardizing bodies and about quality assessments of garments.

CO4- The students will be able to gain knowledge on importance and process of specialization and about fabric inspection to product quality certification.

CO5- The students will gain much ideas or care labels and performance of Indian Garment Export.

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.K Publishers.
- Claire Shaeffer,(2001)Sewing for Apparel Industry, Prentice Hall Publishers.
- www.sewingsolutions.org
 - Elliot Brown Grover, Dame Scott Hamby, (2007) Handbook of textile testing and quality control, Textile Book Publishers.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	1	5	1	4	1	5	1	4	1
CO2	4	2	5	1	2	1	5	1	2	1
CO3	4	1	5	1	2	1	5	1	4	1
CO4	4	2	5	1	4	1	5	1	4	1
CO5	4	2	5	1	4	1	5	1	2	1

FIELD INTERNSHIP (FI)
Project Work cum Internship
50 Marks, Credits-3
Project Work – 50
Internship – 50

Course Outcome:

CO1- The student will be skilled on project report writing.

CO2- The student will be able to aware about various research areas through their exposure visits.

CO3- The student will be able to familiar with the different methods used in research.

CO4- The students will be able to gain knowledge on thorough review of different literatures

CO5- The students will gain much ideas on analysing the collected facts and discussing the results skilfully.

- 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 centres (health centres/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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	1	5	4	5	1	5	5	5	5
CO2	4	2	4	4	4	1	5	5	5	5
CO3	4	1	5	4	5	1	5	5	5	5
CO4	4	4	4	4	4	1	5	5	5	5
CO5	4	1	4	4	5	1	5	5	5	5

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

Course Outcome

- CO1- The student will be able to understand the concept of public health , different determinants of health and indicators of health.
- CO2- The student will gain in-depth knowledge or major nutritional problems.
- CO3- The students will be able to gain experience on several infectious diseases, its causes, symptoms, prevention and possible treatment.
- CO4- The student will be aware about Malnutrition and measure to combat mal nutrition.

- CO5- The student will be able to familiar with the direct and indirect methods of assessing Nutritional status.

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(Vitamin A, Vitamin D,Iron,. Iodine, Fluorine, zinc, Cobalt, 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, 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, NFI, 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 & new foods).

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, PrahladRao 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

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	5	1	1	1	1	5	5	4	2
CO2	5	5	1	1	1	1	5	5	5	2
CO3	5	5	1	1	1	1	5	5	4	2
CO4	1	4	5	5	1	1	5	5	5	2
CO5	1	4	5	5	1	1	5	5	5	2

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

Course Outcome

- CO1- The student will have an exposure visit near by Nutrition Rehabilitation centre.
- CO2- The student will gain expertise in SAM management.
- CO3- The student will get opportunity to visit Anganwadi Centre .
- CO4-The students will gain exposure about the various audio visual aids.
- CO5- The students will be able to gain knowledge on supplementary nutritional management for pre-school children.

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

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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	4	5	1	1	5	5	1	5	2
CO2	2	5	5	1	1	5	5	1	5	2
CO3	2	5	5	1	1	4	5	1	5	2
CO4	2	4	5	1	1	5	5	1	5	2
CO5	2	4	5	1	1	5	5	1	5	2

HARD CORE: Paper-14

Dissertation

100 marks , Credits-5: Lectures: 50 hours

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

1class= 1 hour

Course Outcome

CO1-The students will understand about researchable areas.

CO2- The student will able to learn different data collection techniques and data analysis through computer.

CO3- The students will be able to prepare report on a topic.

CO4- The students will gain exposure to field research.

CO-5-The student will gain knowledge about research process and its application.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	5	5	4	2	2	5	5	5	5
CO2	2	5	5	5	2	2	5	5	5	5
CO3	2	5	5	4	2	2	5	4	5	5
CO4	2	5	5	5	2	2	5	5	5	5
CO5	2	5	5	4	2	2	5	4	5	5

Core Elective Paper- 4(A)

Parenting Across the Life Span

Credits-5: Lectures: 50 hours

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

1 class =1 hour

Course Outcome

- CO1-The students will understand about parenting and parenthood in Indian family life.
- CO2- The student will able to learn parenting roles on a child's life.
- CO3- The students will be aware of types of parenting, its effect on child development and key issues in parenting.
- CO4- The students will gain an insight on challenges of parenting and new age parenting.
- CO-5-The student will explore knowledge about parent education and support.

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 – Aparajita Chowdhury, Academic Excellence, New Delhi.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	4	2	2	4	1	5	1	2	2
CO2	5	4	2	2	4	1	5	1	2	2
CO3	5	4	2	2	4	1	5	1	2	2
CO4	5	4	2	2	4	1	5	1	2	2
CO5	5	4	2	2	4	1	5	1	2	2

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

Course Outcome

CO1-The students will understand transfer of technology and models of technology.

CO2- The student will able to learn about characteristic of entrepreneurship and women entrepreneur.

CO3- The students will be aware of the importance of training in Extension education.

CO4- The students will get expertise in application of IT and E-governance.

CO-5-The student will gain knowledge about management of extension organization.

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 fulfill 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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	4	2	2	1	2	2	2	2	1
CO2	4	4	2	2	1	5	1	1	4	1
CO3	4	4	2	1	1	5	1	1	1	1
CO4	4	4	2	1	1	5	1	5	5	5
CO5	4	4	2	2	1	2	2	1	4	5

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

Course Outcome

- CO1-The students will gain knowledge about introduction to diet therapy.
- CO2- The student will be able to learn diet in infection and fever.
- CO3- The students will be aware of diet in diseases of digestive track.
- CO4- The students will gain an insight on diet in cardiovascular diseases and kidney diseases.
- CO-5-The student will gain knowledge diseases of metabolic disorder.

Unit – I

- **Introduction to Diet Therapy**

Objectives of Diet Therapy, Glycaemic Index, Dietary supplements, Adjuncts to diet therapy

- 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, Types of food, feeding requirements, total parenteral nutrition, 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, diarrhoea in adult

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
- Renal failure: causes, symptoms, dietary management of both acute and chronic renal failure.

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 Churchillivingstone 1975.
- Robinson C.H : Normal and Therapeutic Nutrition memillan and Co.
- SuklaP.K: Nutritional problems of India, Prentice Hall of India.
- F.D.Antia :clnical 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 medicnes.
- 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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	4	4	5	1	1	5	4	1	4	2
CO2	4	4	2	1	1	2	5	1	2	1
CO3	4	2	2	1	1	1	4	1	2	1
CO4	4	4	2	1	1	1	4	1	2	1
CO5	4	4	2		1	1	4	1	2	1

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

Course Outcome

CO1-The students will be aware about present consumer scenario and market.

CO2- The students will learn about household income and expenditure.

CO3- The students will understand about consumer credits practices.

CO4- The students will gain knowledge about Family savings.

CO-5-The student will gain knowledge about consumerism in India.

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.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	4	4	1	1	2	5	1	4	2
CO2	5	5	2	1	1	1	1	1	4	2
CO3	4	4	2	1	1	1	1	1	2	2
CO4	4	4	2	1	1	1	1	1	2	1
CO5	4	4	2	1	1	1	1	1	2	1

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

Course Outcome

CO1-The students will be able to understand the textile management ,,operation strategies, HRM.

CO2- The students will learn about manufacturing operations, Costing and processing.

CO3- The students will gain knowledge about training,, Common training Practices,, Management development programmes.

CO4-The students will learn about formulating sales policies, Advertising and sales promotion and sales forecasting.

CO-5-The student will gain knowledge about human rights, ,disaster Management and Textile and Apparel 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 programme – 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, NewYork.
- Gordon A. Berkstresser, (1984) Textile Marketing Management, Noyes Publications.

MAPPING OF COURSE OUTCOME WITH THE PROGRAMME OUTCOME

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	5	5	1	1	5	2	1	4	2
CO2	5	5	5	1	1	5	2	1	4	2
CO3	5	5	5	1	1	5	2	1	4	2
CO4	5	5	5	1	1	5	2	1	4	2
CO5	5	5	5	1	1	5	2	1	4	2

DEPARTMENT OF HOME SCIENCE

SYLLABUS OF Ph.D. PROGRAMME



RAMA DEVI WOMEN'S UNIVERSITY
Vidya Vihar, Bhubaneswar-751022, Odisha
Website: <https://rdwu.ac.in>

PRE-Ph.D Course Work Syllabus in HOME SCIENCE



RAMA DEVI WOMEN'S UNIVERSITY
Bhoi Nagar, Bhubaneswar, Odisha – 751022, INDIA
<https://www.rdwuniversity.nic.in>

Ms. Parthi
12.10.23
Controller of Examinations
R.D. Women's University
Bhubaneswar

SYLLABUS FOR Ph.D. COURSEWORK IN HOME SCIENCE

All the scholars of Ph.D. program of this Department have to undergo a course work of one semester duration. On successful completion of the course work, the scholars may be eligible for registration for Ph.D. subject to final recommendation of Department Research Committee (DRC). The syllabus structures for coursework is given below.

Papers	Course Title	Credits	Marks	Pass Mark
Paper-I	Research Methodology and Computer Application (Theory & Practical)	4	100	50%
Paper-II	Advance Study in Home Science (Theory)	4	100	50%
Paper-III	Review of Related Literature (Practical)	4	100	50%
Paper-IV	Research and Publication Ethics (Theory & Practical)	4	100	50%
	Total	16	400	50%

Effective from 2021 Academic Session

Duration: 1 semester (6 months), Total 400 Marks

Objectives: The syllabus aims at providing practical knowledge on advance areas of research in Home Science through the practical understanding of research process and ethics:

- Methodological study of research.
- Use of statistics and computer application in the process of research.
- Reviewing literature of the proposed study.
- Seminar presentations on the thrust areas of research in Home Science.

PROGRAM OUTCOME

1. The scholars will be enabled to develop research aptitude in the field of Home Science
2. The scholars will be skilled in identifying research gaps and develop research plans by reviewing literatures related to their interest area.
3. The ethical conduct of research and development activities will be inculcated among the students.
4. To obtain a critical understanding and the ability to apply theoretical, practical and scientific knowledge in the field of Home Science
5. To identify individual, national and global and environmental issues related to Home Science for diverse population.
6. Tap self-potentials through thorough knowledge and research to enhance skills for self-employment and entrepreneurship
7. Analyze the prospects for interdisciplinary research processes.
8. Appraise and promote quality of life, happiness and wellbeing of community in the context of Human Development Index and embark on action and applied research and review policy in context with the current scenario of the nation.
9. Ability to apply knowledge of human development and behavior in research across life span.
10. To get insight into the origin and traditional textile patterns from different corners of India.

PAPER-I

RESEARCH METHODOLOGY AND COMPUTER APPLICATION

COURSE OUTCOMES

- CO 1. To acquaint with fundamental principles and techniques of social science research.
- CO 2. To gain skills in decision making on research topics and identifying sources of research problems, and formulating hypothesis
- CO 3. To aware of the fundamentals of Research Methodology, collecting and analyzing data

CO 4. To develop competency in Literature Review, drawing inferences from data analysis and Report writing.

CO 5. To able to get expertise in tools/software like Excel, MS-Office, SPSS, Active Scholar and alike.

Unit-I

- Research Proposal - Meaning, purpose, steps in designing research proposal.
- Defining Research Problem - Meaning, selecting the problem, necessity of defining the problem, technique involved in defining a problem.
- Measurement and Scaling Techniques - Measurement in Research; Measurement in Scales; Sources of Error in measurement; Tests of sound Measurement; Techniques of developing measurement tools.

Unit- 2

- Data collection - Meaning and types of data collection. Collection of Primary data - Observation method, interview method, questionnaires, schedule, difference between questionnaires and schedules. Collection of Secondary data - Caution using secondary data. Selection of appropriate method for data collection.
- Sampling design - meaning, steps, types and characteristics of a good sampling design.
- Processing of Data - Processing operations (Editing, coding, Classification, Tabulation), Problems in processing.

Unit-3

- Analysis of Data – Meaning, Measures of Central tendency (Mean, Median, Mode) Measures of Dispersion - Meaning, Types of dispersions (Range, mean deviation, standard deviation)
- Measures of Relationship (Correlation) - meaning, significance, types (Curvilinear or Non-Linear relationship, Partial and Multiple Correlation). Calculation of Coefficient of Correlation, Product Moment Correlation, Correlation from Rank.
- Chi-Square Test – Chi-Square as a Test for comparing variance; Chi-Square as a Non-parametric Test; Conditions for the application of Chi-Square Test.

Unit- 4

- Interpretation and Report Writing - Meaning, techniques, precaution of interpretation. Significance of report writing, step, layout of the research report, Types, Precautions for writing research reports.
- Data Analysis through computer applications using SPSS and EXCEL Packages. Presentation structure - introduction to slides, Graphs/ Diagrams, creating presentations and adding effects.
- Preparation of Power Point presentation of synopsis/seminar paper/ review of of literature.

Books Recommended for Reference

- Social Survey and Research - Dr. S. R. Bajpai, Kitab Ghar Kanpur
- Statistical Methods - S.P. Gupta Sultan Chand and Sons Publisher, New Delhi
- Fundamentals of Statistic - D.N. Elhance
- Ahuja, R (2009) Research Methods, Rilwat publications
- Bajpai, S.R.(201 1)Method of Social Survey and Research, Grantham Printing Press
- Creswell, J. W. (2013). Qualitative Inquiry and Research Design: Choosing Among Five Approaches, Sage
- Crotty, M. (1998). The Foundations of social research: Meaning and perspective in the research process. London: Sage.
- Denzin, N. K., & Lincoln, Y. S. (2011), The SAGE Handbook of Qualitative Research. Sage.
- Goode and Hatt. (1952). Methods in Social Research. Bombay: Macgrawhill
- Kothari C., R. (2004). Research Methodology: Methods and Techniques. New Delhi New Age International (P) Limited, Publishers.
- Neuman, W. L. (2000). Social research method s. Qualitative and Quantitative approaches (4th Ed.). Boston: Allyn and Bacon.
- .Patton, MQ. (2001). Qualitative Evaluation and Research Methods (2nd Edition). Thousand oaks, CA: Sage Publications.
- Rathod, B.P.(2010) .Strategies and Techniques in Social Science Research, ABD Pulishers
- Sharma, M (2010) Research Methodology: Assignment, Seminar Paper and Project, EBH Publishers
- Walliman, N (2015) Your Research Project Designing and Planning Your Work, Sage

MAPPING OF COURSE OUTCOMES WITH THE PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	4	2	5	2	2	5	1	4	1
CO2	4	5	2	4	2	4	1	1	2	1
CO3	4	5	2	4	2	2	1	1	2	1
CO4	2	5	2	4	5	2	1	5	2	1
CO5	2	4	2	2	2	5	1	1	2	1

PAPER 2

ADVANCE STUDIES IN HOME SCIENCE

- **COURSE OUTCOME**
- CO 1. To gain knowledge on basic principles of food fortifications, and food and microbial interaction.
- CO 2. To understand human health implications of organic food and role of antioxidants in preventing degenerative diseases.
- CO 3. To develop idea about origin, history and growth of Indian traditional textile.
- CO 4. To relate various concepts of consumer education, entrepreneurship and develop entrepreneurship potential.
- CO 5. To gain the in-depth knowledge on childhood assessment tools, parenting, geriatric care and families on 21st century.

Unit-1 Food and Nutrition

- Food Fortification: Objectives and need for food fortification; types of food fortification; Food fortification programs- iodized salt, fortification of vitamin A and D, iron fortification; fortification of infant's foods.
- Ant- Oxidants: Free radicals, Anti-oxidants and diseases. Sources of anti-oxidants. Role of anti-oxidants in combating free radicals and preventing degenerative diseases; effect of cooking on anti-oxidants.
- Organic Foods : Characteristics and importance of organic foods; Types and principles of organic farming; Difference between organic and conventional farming; Classification of organic products.
- Food Quality Assessment: Causes of spoilage. Safety & Care of Food Supply- Microbial hazards, Residue Pollutants, Natural toxicants in Foods, Food Poisoning

Unit-II Textiles & Clothing

- Theories of the Origin of clothing: Modesty theory, immodesty theory, adornment theory, Protective theory
- Wardrobe Planning for the family: Colour combination in apparels of men, women and children belong to Hindu, Muslim and Christian communities for different occasions such as Marriage, death, festivals, casual wear and professional wear.
- Socio-psychological aspect of Clothing: Perception Behaviour, Choice, Motivation, Shopping behavior and satisfaction, age differences. Designs in dress- Personality, figure, the material, prevailing style, suitable decorations
- Woven Textiles from Northern and southern India- Origin, material & techniques used Rajasthan- Kota Doria Gujarat- Sujani, Tangaliya, Pachhedi Madhya Pradesh- Chandero, Maheshwari Uttar Pradesh- Brocades West Bengal- Dacca muslin, Baluchari Tangail; Shawls from Kashmir, Assam and Nagaland. Odisha's Sambalpuri, maniabandh; Maharashtra; Paithani, Himroo Andhra Pradesh and Telengana- Dharvaram, Venkatgiri, Gadwal and Naryanpet Karnataka-Iikal, Khann Tamil Nadu- Kanjeevaram

Unit-III Human Development and Family Studies

- Childhood Assessment Tools and Techniques used for children's overall Developments- Physical, social, emotional, Speech and Intellectual potentials.
- Parenting and Parenthood: Meaning and significance, foundation of parenthood in Indian Family Life- Traditional and contemporary. Parental Roles- Determinants of parenting behavior; Role of father and mother. Stages of Parenthood- Prenatal stage, infancy, childhood, adolescence, adulthood and old age (grand parenting). Challenges of Parenting- Role stress, work-family balance, disagreements and conflicts between the spouses, having children with disability/chronic illness.
- Ageing and Well-Being- Demographic profile of elderly in Odisha and India. Living arrangements (intergenerational families, old age homes, institutes etc.) and new models of care giving. Overcoming mental health challenges (loneliness, depression, anxiety, dementia, other age-related diseases etc). Life style changes and holistic health (physical well-being, food choice, yoga and restorative fitness, counseling and therapy, social and interpersonal support systems). Technology and aging (use of internet, advances in health and medical treatment, gadgets supporting safety and security of elderly) Leisure time activities and innovative models of developmental intervention.
- Preparing families for 21st century- Contemporary family problems, effect, coping strategies and possible prevention. Family life Enrichment- Meaning, need and aspects of family Life enrichment. Individual's right to have a family; Family's Rights and Responsibility with reference to the environment scope of family life enrichment.

Unit-IV Entrepreneurship Development and Consumer Education:

- Developing a business plan- Market survey, resource survey, entrepreneur survey, identification of business opportunity
- Some business areas for entrepreneurial venture- Agriculture, horticulture, fishery, animal husbandry, eco-tourism, retail marketing, food processing, dress designing, fashion designing.
- Introduction to Consumer Behavior- Defining consumer behavior, Nature and scope of consumer behavior, characteristics of Indian Consumers; consumer decision making. Changing Patterns of Consumer Behavior- Demographic Trends, technological trends; implications of technological trends on consumer behavior; Trends in Public Policy.
- Environmental determinants of consumer behavior- Influence of culture; Group influence on consumption. Family Buying decisions.

Books recommended for Reference:

Unit-1

- B.Sreelakshmi- Food Science
- B. Sreelakshmi- Nutrition Science
- Manay,S.N and Shadaksharaswamy (2017) Foods: Facts and Principles, Third Revised Edition, New Age International (P) Publishers, NewDelhi
- Potter,N.N. and Hotchkiss, J.H (2006), Food Sciences, fifth edition, CBS Publishers and Distributors, New Delhi
- Swaminathan M (2007), Essentials of Food and Nutrition. An advanced Textbook Vol.I and II, the Bangalore Printing and publishing Co. Ltd, Bangalore.
- Davidson S.R. Passmore, J.F. Brock and A Trasw ill Human Nutrition and dietetics, English language book society and Churchill livingstone 1975
- N. Shakuntala many ama M. Shadaksharaswamy, New Age International publication Food facts and principles.
- Robinson C.H: Normal and Therapeutic Nutrition memillan and Co.
- Behum Reheana: A textbook of foods Nutrition and Dietetics, sterling publications Pvt Ltd.
- Subhangini A Joshi, Tata- McGraw Hill Publishing Company Ltd. New Delhi. Nutrition and Dietetics
- M.S Bamji, N.P Rao and V. Reddy- Oxford and IBH publishing Co. Pvt Ltd. Textbook of Human Nutrition

Unit-II

- Textile Fiber to fabric 0 Bernad P CORbamn
- Our Clothing J.N Lippincott, Newyork
- Clothing for Moderns: Mac Millan Company, New York
- Modern Textiles: L.S. Dorathy, John wiley, New York

Unit-III

- Indian families at the Cross Roads- edited book David K Carson, Cecyle K. Carson, Aparajita Chowdhury Gyan Publishing House, New Delhi
- Textbook on Child Development and Family Relationship- Dr. Aparajita Chowdhury, Published by Academic Excellence, NewDelhi
- Family Life Education in India- Perspectives, Challenges and Applications- edited book by David K Carson, Cecyle K. Carson, Aparajita Chowdhury Rawat Publication New Delhi
- Human Development- Diane E. Papalia, Mc Graw Hill Publication
- Lamb, S. E (Ed). (2012) Aging and the Indian diaspora: Cosmopolitan families in Indian and abroad. New Delhi Orient Blackswan
- Cavanaugh, J. & Blanchard- Fields F. (2011) Ault developmeny amd aging (7th ed) Stanford, C.T: Cengage Learning
- Kekar, S.(Ed). (1993) identify and adulthood. NewDelhi Oxford University Press

Unit-IV

- Extension Communication and Management- G.L.Ray
- Extension Education and Communication – V.K.Dubey & Indira Bishnoi
- Communication & Social Change- Chhabraf
- Social Problems & Social Disorganization- C.B Memoria

MAPPING OF COURSE OUTCOMES WITH THE PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	4	5	5	5	5	5	1	4	2
CO2	2	5	2	5	5	1	5	1	4	2
CO3	2	4	2	5	5	1	5	1	2	5
CO4	2	4	2	5	5	1	5	1	2	1
CO5	2	4	2	5	5	1	5	5	5	1

REVIEW OF RELATED LITERATURE & SEMINAR PRESENTATION

Credits: 04, Full marks: 100 (practical)

Each student is required to select a problem on which she has to do intensive review of related studies under the supervision of a faculty member of the department. She has to review adequate research studies related to the problem and prepare a report. The student is required to submit a report on the review carried out by her and needs to give a power point presentation before the DRC. Assessment shall be made on the basis of the following criteria.

- Relevance of the reviews.
- Finding the research gap

- Standard and quality of writing the review.
- Style of presentation
- Answering the question.

If the presentation is unsatisfactory, the DRC may direct the student to amend the review of literature and ask for a 2nd or 3rd presentation. The candidate would present two seminars before the DRC on the specific areas of research, which she will carry on for conducting her research.

Distribution of marks for evaluation

1. Review of literature and presentation :50 marks (20+30)
2. Seminar presentation :50 marks (20+30)

Total marks :100 marks

COURSE OUTCOMES

CO 1. To conduct review of related literature.

CO 2. To identify the research gap and write the review in a synchronized manner.

CO 3. To find out variables relevant to the selected research area.

CO 4. To summarize the findings of different research studies.

CO 5. To write a thematic paper on any contemporary issue in the subject.

MAPPING OF COURSE OUTCOMES WITH THE PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	5	2	1	1	2	5	1	4	2
CO2	5	5	2	1	1	1	1	1	4	2
CO3	5	5	2	1	1	1	1	1	2	2
CO4	5	5	2	1	1	1	1	1	2	1
CO5	5	5	2	1	1	1	1	1	2	1

PAPER- IV

RESEARCH AND PUBLICATION ETHICS

Credits: 04, Full marks: 100 (Theory-75) + (B- practical-25)

COURSE OUTCOMES

CO 1. To learn about the philosophy of research ethics.

CO 2. To gain in-depth knowledge on different scientific conducts of research ethics.

CO 3. To aware the students on publication ethics, its violation and misconducts.

CO 4. To learn the terms and condition of open access publications.

CO 5. To gain an insight on different journal suggestion tools, different software for checking plagiarism and different predatory journals.

A-THEORY

Unit-I: philosophy and ethics:

- Introduction to philosophy: definition, nature and scope, concept, branches
- Ethics: definition, moral philosophy, nature of moral judgement and reactions.
- Intellectual honesty and research integrity
- Conflict of interest

Unit-II: Scientific conduct:

- Ethics with respect to science and research
- Scientific misconduct: Falsification, Fabrication and Plagiarism (FFP)
- Redundant publications: Duplicate and overlapping publications.
- Selective reporting and misrepresentation of data.

Unit-III: Publication ethics:

- Publication ethics: Definition, introduction and importance
- Violation of publication ethics, authorship and contributor's ship
- Publication misconduct: definition, concept, problems that lead to unethical behavior, types,

identification of publication misconduct, complaints and appeals.

- Predatory publishers and journals

B-PRACTICAL

Unit-I: Open Access Publishing:

- Open access publications and initiatives
- Online resource to check publisher copyright and self-achieving policies (SHERPA/ RoMEO)
- Journal finder/ journal suggestion tools viz. Elsevier finder, Springer, Journal suggester etc.

Unit-II: Publication Misconduct:

- Use of plagiarism software like Turnitin, Urkund and other open-source software tools
- Software tools to identify predatory publications developed by SPPU
- Indexing databases

MAPPING OF COURSE OUTCOMES WITH THE PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	5	4	4	1	1	2	5	1	4	2
CO2	5	5	2	1	1	1	1	1	4	2
CO3	4	4	2	1	1	1	1	1	2	2
CO4	4	4	2	1	1	1	1	1	2	1
CO5	4	4	2	1	1	1	1	1	2	1

- 3 Note related: 1
- From What Related: 2
- Nutral: 3
- Moderately Related: 4
- Highly Related: 5

