

HOME SCIENCE DEPARTMENT
 JAI NARAIN VYAS UNIVERSITY, JODHPUR
 SYLLABUS AS PER NEW EDUCATION POLICY
 B. Sc. HOME SCIENCE CBCS SCHEME 2023-24
 SEMESTER – I & II
SEMESTER – I (2023-24)

Level/ Semester	Nature of Course	Course Code	Course Title	MM	Lecture r	Tutorial	Practical	S	Total Credits
I Semester L5	DCC I	H. Sc. 5001 T	Elements of Science	100	-	6	-	-	6
		H. Sc. 5002 T	Life Span Development (Prenatal to Infancy)	100	-	4	-	-	4
		H. Sc. 5001 P	Science of Human Development Practical	50	-	-	2	-	2
		H. Sc. 5003 T	Human Physiology & Basic Nutrition	100	-	4	-	-	4
		H. Sc. 5002 P	Basic Nutrition practical	50	-	-	2	-	2
	AECC	H. Sc. 5004 T	English	100	-	2	-	-	2
TOTAL				500	-	16	4	-	20

SEMESTER – II (2023-24)

Level/ Semester	Nature of Course	Course Code	Course Title	MM	Lecturer	Tutorial	Practical	S	Total Credits
II Semester L5	DCC II	H. Sc. 5005 T	Principles of Home Management	100	-	6	-	-	6
		H. Sc. 5006 T	Extension Education & Communication	100	-	4	-	-	4
		H. Sc. 5003 P	Extension Education Practical	50	-	-	2	-	2
		H. Sc. 5007 T	Clothing & Textile Science	100	-	4	-	-	4
		H. Sc. 5004 P	Clothing & Textile Practical	50	-	-	2	-	2
	AECC	H. Sc. 5008 T	Hindi	100	-	2	-	-	2
TOTAL				500	-	16	4	-	20

B. Sc. Home Science (Semester - I)
Course code H. Sc. 5001 (T)
PAPER – I
ELEMENTS OF SCIENCE

Time: 6 Hours
Max. Marks: 100

UNIT-I

Ventilation - Meaning, need and purpose

1. Terms related to ventilation- infiltration, distribution and circulation
2. Types- Natural ventilation, mechanical ventilation, whole house ventilation, spot ventilation, mix mode ventilation
3. Ventilation for different climates

Light - Introduction and sources of light-

1. Properties of light
2. Factors affecting visual acuity- light intensity, freedom from dazzle, uniform lighting throughout the room, and steady level of illumination.
3. Light pollution

Noise - Definition

1. Sources (indoors and Out door)
2. Effect of noise auditory (loss of hearing), and non auditory- hypertension, hyperacidity, loss of concentration, interference with verbal communication

UNIT-II

Lubricants- Properties, classification and uses

1. Dyes classification, based on application and functional group
2. Fertilizers and manures : uses
3. Freon Gas Composition and uses

Tarnishing of metals

1. Metal polishes: Organic coatings paints, pigments, wood polishes, shoe polish
2. Elementary idea of the chemistry of the following:
 - a. Polymers- classification and their uses
 - b. Bleaching powder, plaster of Paris

UNIT – III

Fuels -

1. Solid fuels – Wood, coal, types and selection
2. Liquid fuels- Petroleum, fractionation
3. Gaseous fuels- Bio gas, LPG, oil gas, coal gas.
4. Producer gas, Water gas
5. Non conventional fuel-Solar energy

Common drugs and medicines - used at home

1. Narcotics and effects of over drugging – L.S.D. Heroine, Brown Sugar
2. Uses and Hazards of:
 - a. Cosmetics
 - b. Common insecticides, pesticides, and rodent cider eg., DDT, BHC, Aldrin gamexene
 - c. Antiseptics and Disinfectants

UNIT – IV

Life Sciences –

1. Human genetics: Human chromosomes normal and abnormal karyo types. Heredity and environment relationship as revealed by studies on human twins.
2. Elementary idea of heredity human diseases and genetic abnormalities such as haemophilia, colour blindness, phenyl ketonuria, sickle cell anemia, mongolism and leukemia.

UNIT – V

Importance of micro-Organism -

1. Microbiology of foods – Introduction, basic concepts, role of micro organisms in fermented foods
2. Food spoilage – Introduction, factors, chemical changes due to spoilage
3. Control and destruction of micro organism in foods – physical and chemical methods

B. Sc. Home Science (Semester - I)
Course code H. Sc. 5002 (T)

PAPER – II

LIFE SPAN DEVELOPMENT (PRE NATAL TO INFANCY)

Time: 4 Hours
Max. Marks: 100

UNIT – I

1. 1. Meaning and importance of studying human development and family studies.
2. Concept of life span development.
2. Development: definition of growth and development and the difference, Dimensions of development: Physical, Motor, Cognitive, Socio and emotional development
3. Principles of development.
4. Stages of human development and their importance.
5. Concept of developmental task and tasks of all the stages.
6. Context of development: Introduction to concept of nature and nurture.
7. Genetic inheritance: introduction to genes and number of chromosomes, Genotype and Phenotype.
8. Context of development: Family, SES, gender and culture.

UNIT – II

1. Anatomy and physiology of male and female reproductive organs- Ovulation and sperm formation.
2. Fertilization, menarche and menopause.
3. Signs and symptoms of pregnancy.
4. Common ailments during pregnancy and their managements.
5. Prenatal period- stages in prenatal development: zygote, embryo and fetus.
6. Teretogens: factors affecting prenatal growth and development.
7. Disorders in pregnancy: Hypertensive preeclampsia, eclampsia, pernicious vomiting.
8. Regular medical checkups: importance and schedule.

UNIT – III

1. Care of expectant mother.
2. Preparation for confinement and arrival of new born.
3. Delivery & birth process.
4. Intensive new born care and APGAR test.
5. Minor ailments of newborn and their management: colic, jaundice, napkin rash, umbilical infection, infection of eye and breast in new born.

UNIT – IV

1. Care during puerperium.
2. Family planning methods including MTP and sterilization.
3. Abortion and miscarriage: symptoms and care, different types of abortion.
4. Child at birth: (i) Neonatal physique (ii) Sensory and motor reflexes
(iii) Sleeping crying and emotional behaviour.

UNIT – V

1. Characteristics of human infant: from state of helplessness to gradual control over body and development of understanding of immediate environment.
2. Physical development during infancy weight, height, closure of fontanelle and teething.
3. Motor control: grasping, holding the head, seating, crawling, creeping and walking.
4. Socio emotional development during infancy: development of attachment and sense of security. Separation and stranger anxiety.

(Semester - I)
Course code H. Sc. 5001 (P)
Practical - I
SCIENCE OF HUMAN DEVELOPMENT

Time: 2 Hrs.
Max. Marks: 100

1. Child Development

- i. Making a growth enhancing toy/material
- ii. Preparation of resource file containing
 - a. 10 stories for children
 - b. 10 songs for children
 - c. Collect 10 current articles on child development from news paper/magazines etc. and its display on board.
- iii. Prepare a chart/flip/book/album depicting all the stages of human development covering at-least one developmental task at each stage.
- iv. Techniques of anthropometric measurement (height, weight and head circumstances)
- v. Accidents and emergencies in childhood and their first aid
Electric shock, foreign body in nose, ears and eyes, animal bite: dog, snakes and insects and burns.

B. Sc. Home Science (Semester - I)
Course code H. Sc. 5003 (T)
PAPER - III
HUMAN PHYSIOLOGY & BASIC NUTRITION

Time: 4 Hours
Max. Marks: 100

UNIT – I: The vascular system:

- a. Composition and function of blood, blood groups, blood transfusion, blood banks, blood clotting
- b. Structure and functions of heart, blood vessels, blood circulation in the body, blood pressure and pulse rate

UNIT – II: The Digestive systems:

Structure and functions of the digestive organs, mechanism of digestion and absorption of proteins, fats and carbohydrate

The Excretory System:

- a. Structure and function of excretory organs, composition of Urine
- b. Structure and function of skin, regulation of body temperature

UNIT – III: The Endocrine system:

Role of hormones and effect of hypo and hyper activity of following hormones secreted by endocrine glands of the body:

Hypothalamus, Pituitary, Pineal, Thyroid, Parathyroid, Adrenal, Pancreas, Ovaries, Testes

UNIT – IV: Introduction to nutrition science –

- a. Definitions – nutrition, food, health, nutrition, balanced diet, malnutrition, dietetics, diet therapy.
- b. Food as a source of nutrient.
- c. Food is more than nutrient – roles of food.
- d. Food groups – classification, characteristics

UNIT – V

1. Food preparation –
 - a. Reasons for cooking
 - b. Methods : classification, procedures
 - c. Effect of cooking on nutritive value of food
2. Recommended dietary allowances
 - a. Factors affecting RDA
 - b. General principles of deriving RDA
 - c. Determination of RDA of different nutrients
 - d. Requirement of RDA
 - e. Practical applications of RDA

(Semester - I)
Course code H. Sc. 5002 (P)
Practical - II
BASIC NUTRITION

Time: 2 Hrs.
Max. Marks: 50

- (i) Cookery:
Terms, weight & Measures, principles for designs in lying of meals, types of serving
- (ii) Cooking Methods
Demonstration of methods: Boiling, Steaming, Baking, Roasting and Frying (Shallow & Deep)
- (iii) Preparation of Five dishes each of the following:
 - a. Drinks, Soups
 - b. Snacks, Raita & Chutney
 - c. Vegetables, Pulses, Salads
 - d. Rice preparation Pulav, Biryani etc.
 - e. Sweets deserts and Ice Cream
 - f. Cakes & Biscuits
 - g. Demonstration on Cake Icing
- iv) Theme parties with decoration
Festivals/birthdays

B. Sc. Home Science (Semester - II)
Course code H. Sc. 5005 (T)
PAPER - V
PRINCIPLES OF HOME MANAGEMENT

Time: 6 Hours
Max. Marks: 100

UNIT - I

1. Introduction to Management
 - i. Concept & definition of management
 - ii. Communication in management
 - iii. Managerial function of families & management
2. Decision making in management
 - i. Types of steps in decision making
 - ii. Factors affecting in Decision making
3. System approach to the study of management
 - i. Definitions and characteristics

UNIT - II

1. Factors motivating management:
 - a. Values- Classification and hierarchy, sources, origin characteristics, factors influencing values, changes values and their causes
 - b. Goal-types, Characteristics, factors influencing goals
 - c. Standards-conventional and modern, flexible and rigid
 - d. Needs and wants
2. Resources & their management in the family
 - i. Introduction, definition & usefulness of resources
 - ii. Differences among Resources
 - Quantitative resources
 - Qualitative resources
 - iii. Classification of resources
 - Human versus Non human resources
 - Economic versus Non economic resources
 - iv. Resources classified by their sources
 - Resources from the near & larger environment
 - Resources from the household environment
 - Resources located in the family system
 - v. Resources as a system
 - Interrelated demands'
 - Substitution
 - Crucial resources
 - Conversion or creation
 - vi. Family resources as a unit
 - vii. Guidelines for the use of resources
 - Increase total supply of resources
 - Know alternate uses
 - Consider amounts of resources to invest
 - Increase utility per unit of resources
 - Expand appreciations'
 - Balance choice among resources

UNIT - III

1. Management of time as a resource
 - Characteristics & nature of time
 - Tools, time pattern & time cost. Norms, peak Loads, work units, work curves, rest periods.
 - Process of managing time
Planning, Controlling & evaluating
2. Management of money as a resource
 - i. Definition & types of income & their sources
 - a. Money income
 - b. Real income
 - Direct income to include household production, free goods & services, owned durable goods & social income.
 - Indirect income to include money income such as wages, salaries, interest, profit, rent & fringe benefits.
 - c. Psychic income
 - ii. Expenditure
 - Definition of expenditure
 - Factors affecting expenditure
 - iii. Taxation
 - Meaning objective of taxation
 - Types of taxation, direct & indirect
 - iv. Saving & investments

UNIT - IV

1. Management of energy as a resource
 - Household task and effort
 - Concept of the human cost of work-fatigue- causes, types, prevention
 - Cost of work-Human energy expenditure, oxygen consumption methods of measurement, other measures of cost of work
 - Body mechanics
 - Types of efforts-effects of working heights and storage in relation to anthropometry

UNIT - V

1. Work Simplification:
 - Work Study techniques
 - Mundel Classes of changes in household activities
 - Factors affecting work-human and environmental
 - a. Human-worker's attitudes knowledge, skill, time, human energy
 - b. Environment-work space, fitness, climate, lighting equipment and service work, worker environment, relationship-co-ordination and fitness
 - Postures –types of postures, maintenance of good postures in household activities
Fatigue-types, avoidance of fatigue

B. Sc. Home Science (Semester - II)
Course code H. Sc. 5006 (T)
PAPER - VI
EXTENSION EDUCATION & COMMUNICATION

Time: 4 Hours
Max. Marks: 100

UNIT – I Introduction of Extension education:

- a) Concept of Education, Non formal , Formal, Informal and Extension Education
- b) Objectives of Extension Education
- c) Function and Scope of Extension Education
- d) Principles of Extension Education
- e) Process of extension education.
- f) Qualities of an Extension worker
- g) Philosophy of extension education

UNIT- II Introduction to Communication

1. Meaning
2. Is communication an Art or Science
3. Elements of Communication and their characters tics- communicator, message, channels, treatment of message, Audience and audience response
4. Commandments of good communication
5. Seven C,s of Communication
6. Objective of communication
7. Self confidence for effective communication

UNIT- III Communication Media and Information technology

1. Folk Media- meaning, Importance and Types
2. Electronic media- media and advantage
3. Importance, advantage and disadvantage of Radio
4. Telecommunication (meaning and use in communication only)- Television, Telephone, mobiles, video conferencing, E- mail, Fax,
5. Information technology and its use in education, factor effecting selection of technology
6. Advantages and disadvantages of mechanization of communication

UNIT - IV : Communication for Extension :

1. Formal and informal communication- their types, advantages and disadvantages
2. Effective writing- objectives, essentials and media of written communication,
3. Art of listening in communication- good listening, principle and guidelines for effective listening
4. Effective speaking- principles, guidelines and styles and media for oral communication

UNIT- V - Communication of Innovation :

1. Concept of Innovation
2. Characteristics of Innovation
3. Adoption Process
4. Factors affecting the adoption of Innovation
5. Adopters categories

(Semester - II)
Course code H. Sc. 5003 (P)
Practical - 3
EXTENSION EDUCATION

Time: 2 Hrs.
Max. Marks: 100

- (I) Developing skills in puppet as folk media-
- Preparation of puppets
 - Prepare script for puppet play on any social issue
 - Present puppet show
- (II) Prepare scrap book contains different electronic media
- (III) Writing success stories to present on Radio
- (IV) Visit to training and development organization
- (V) writing report of the same visit

B. Sc. Home Science (Semester - II)
Course code H. Sc. 5007 (T)
PAPER - VII
CLOTHING AND TEXTILE SCIENCE

Time: 4 Hours
Max. Marks: 100

UNIT – I

1. Importance of studying textiles, its relation to Home Science.
2. Essential properties of textile fibers.
3. Classification of textile fibers.
4. Identification of textile fibers

UNIT – II

1. Types of Textile fabrics.
2. Textile terminology
3. Fashion Terminology
4. The consumer's interest in fibers and fabrics

UNIT – III

1. Introduction to weaving
2. Terms used in weaving
3. Loom its parts and working
4. Knitting - Terminology and types of knits

UNIT – IV

1. Fashion change and consumer acceptance
2. Careers in Fashion industry
3. Labeling of Textiles
4. Textile Research Associations

UNIT – V

General Principles of Clothing Construction:

- (1) Drafting & making paper pattern.
- (2) Taking body measurement for different types of garments.
- (3) Preparation of fabrics for Garment Making.
- (4) Estimation of material required for different garments
- (5) Laying out of patterns, cutting & marking

(Semester - II)
Course code H. Sc. 5004 (P)
Practical - 4
CLOTHING AND TEXTILE

Time: 2 Hrs.
Max. Marks: 100

1. Part of sewing machine – equipment for measurement, planning, cutting and sewing
2. Construction process in garment making (samples)
 - a. Stitches
 - b. Seams
 - c. Darts, pleats, tucks, gathers
 - d. Mending, patches and darning
 - e. Different embroidery stitches (making their samples)
 - f. Knitting samples
3. Infant garment
Baby's layette – diaper, jhabla, bib,
4. Making of soaps and detergents.