Suggested Readings

- **Baron, Robert, A., & Misra. Girishwar.** (2016). *Psychology* (Fifth edition). Pearson Education India.
- **Ciccarelli, S. K., White, J. N., & Misra, G.** (2025). *Psychology* (Seventh edition). Pearson Education.
- **Horton, P.B. and C.L. Hunt,** 1985, Sociology, New York: McGraw Hill. Chapter 7 & 20, pp. 154-181, 509-540.
- **Shah, G., & Bara, J.** (2020). Introduction: Tribes in India and their education. In *Social Inclusion and Education in India* (pp. 1-31). Routledge India.
- **Srinivas, M.N.,** 1969, "The Caste System in India", in A. Beteille (ed.) Social Inequality: Selected Readings. Harmondsworth: Penguin Books, pp.265-272.
- **Stern, Robert W.** 2003. Changing India. Cambridge: CUP. Introduction. Change, societies of India and Indian Society.

Note: Examination scheme and mode shall be as prescribed by the Examination branch, University of Delhi, from time to time.

Bachelors in Arts with Community Scienceas non-Major
Category-III

DISCIPLINE SPECIFIC CORE COURSE – DSC-4-HSC: SCIENCE APPLICATIONS IN HOME SCIENCE

CREDIT DISTRIBUTION, ELIGIBILITY, PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit distribution of the course			Eligibility Criteria	Prerequisite of the course
		Lecture	Tutorial	Practical		
Science Applications in Home Science	4	3	0	1	Class XII Pass	NIL

Learning Objectives

- To introduce basic scientific principles and their practical applications in everyday life, with special reference to Home Science.
- To integrate chemistry, physics, biological sciences, and environmental science to help students understand health, nutrition, household management, textiles, and sustainability through simple scientific explanations.
- To emphasise observation, practical skills, and real-life problem solving rather than theoretical complexity.

Learning Outcomes

The students would be able to:

- Explain common household phenomena scientifically.
- Interpret labels, cleaning agents, and eco-friendly products.
- Use basic measuring instruments and understand energy consumption.
- Identify useful plants, microbes, and animals in daily life.
- Understand disease prevention, immunity, and nutrition.
- Apply sustainability and environmental responsibility in home management.

THEORY
(Credits 3; Hours 45)

UNIT I: Chemistry in Everyday Life 12 Hours

This unit introduces basic chemical concepts and explains their role in everyday household activities such as cooking, cleaning, nutrition, and hygiene. It helps learners understand how common substances and reactions affect health and home management.

- Water and solutions in daily life (drinking water, cleaning solutions, ORS)
- Acids, bases, and pH (digestion, cleaning agents, cosmetics)
- Oxidation and antioxidants (food spoilage, preservation, health)
- Soaps and detergents — cleansing action and environmental impact
- Disinfectants and hygiene practices
- Natural and synthetic dyes in textiles and foods
- Biomolecules in nutrition: carbohydrates, proteins, fats

Unit II: Physics in Household Technology and Energy Use 12 Hours

This unit explains simple physical principles behind household appliances, heat, electricity, and energy use. It focuses on practical understanding of safety, efficiency, and energy conservation in daily life.

- Measurement and everyday units (temperature, weight, electricity)
- Heat and temperature — cooking, refrigeration, insulation
- Electricity at home — current, voltage, appliances
- Energy consumption and electricity bills
- Electrical safety — fuses, earthing, safe appliance use
- Renewable energy in homes (solar cookers, heaters)
- Light and sound — lighting, vision, noise control

Unit III: Plant Science for Food, Health and Environment 12 Hours

This unit explores the importance of plants in nutrition, health, and environmental sustainability. It introduces basic plant functions, home gardening, and the role of plants in maintaining ecological balance.

- Importance of plants in human life
- Food crops, fibre crops, medicinal plants
- Plant nutrition and soil health
- Gardening and kitchen gardens
- Organic farming and sustainable agriculture
- Plant propagation (cutting, grafting, tissue culture)
- Role of plants in pollution control

Unit IV: Animal Science, Health and Immunity 9 Hours

This unit explains the role of animals in human life, food systems, and ecosystems, along with basic concepts of human health, immunity, and disease prevention. It emphasises awareness of nutrition, hygiene, and health protection.

- Animal products and human needs (milk, honey, silk)
- Role of animals in ecosystem balance

- Common infectious and zoonotic diseases
- Basics of human immunity and vaccination
- Nutrition and health protection
- Genetic health and birth defects (basic awareness)
- Biotechnology in health and agriculture (simple concepts)

PRACTICAL
(Credit 1; Hours 30)

1. **Chemistry Applications**
   - Testing pH of household substances
   - Preparation of cleaning solutions
   - Identifying food nutrients (simple tests)
   - Water quality observation
   - Safe chemical handling

2. **Physics Applications**
   - Measuring temperature and electricity use
   - Reading energy labels and star ratings
   - Simple electrical circuit demonstration
   - Heat retention experiment

3. **Biological Applications**
   - Identifying common plants and their uses
   - Kitchen garden planning
   - Hygiene and handwashing demonstration
   - Observation of microorganisms (demonstration)

Essential Readings

- **Gupta R** 2015. Fundamentals of Zoology. Theory into Practice. Elite Publication House Pvt. Ltd. New Delhi
- **Upadhyay R** 2017 Elements of Plants Science. Elite Publishing House, New Delhi
- **Gomber K.L., Gogia K.L.** (2015). Fundamental Physics. Pradeep publications, Jalandhar.
- **Walker, J., Resnick, R., Halliday, D.** (2013). Fundamentals of Physics. Wiley, United States.
- **Bahl A. and Bahl B.S.** (2016). A textbook of Organic Chemistry. S. Chand and Sons, New Delhi.
- **Sharma P. and Pathania.** (2016). Principles of Physical Chemistry. Vishal Publishing Company, New Delhi.

Suggested Readings

- **Jordan E L and Verma P. S.** 2009 Invrtebrate Zoology S. Chand and Co Ltd, New Delhi
- **Raven P and Johnson G.** 2010 Biology. Tata McGraw Hill Publication, New Delhi
- **Bahl A. and Bahl B.S.** (2012). Advanced Organic Chemistry. S. Chand and Sons, New Delhi.
- **Jacob T.** (1979). Textbook of Applied Chemistry. McMillan India Ltd., Noida.
- **Lal S.** (1995). Fundamental Physics. Pradeep Publication, Delhi.
- **Morrison and Boyd.** (2011). Organic Chemistry. Pearson Education, New Delhi.

- **Singh H.** (2001). B.Sc. Practical Physics. S. Chand and Co., New Delhi.
- **Vogel** (2009). Quantitative Chemical analysis. Pearson Education, New Delhi.

Note: Examination scheme and mode shall be as prescribed by the Examination branch, University of Delhi, from time to time

Bachelors in Arts with Community Scienceas Major
Category-II

DISCIPLINE SPECIFIC CORE COURSE – DSC-4A-HSC: INTRODUCTION TO TEXTILE AND APPAREL DESIGN

CREDIT DISTRIBUTION, ELIGIBILITY, PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit distribution of the course			Eligibility Criteria	Prerequisite of the course
		Lecture	Tutorial	Practical		
Introduction to Textile and Apparel Design	4	3	0	1	Class XII Pass	NIL

Learning Objectives

- To introduce students to the fundamentals of textile fibres, yarns, fabrics.
- To develop a basic understanding of applied textile design techniques and Indian textile crafts.
- To familiarise with the essential terminology and processes related to apparel design and construction.
- To develop basic skills in the use of surface design techniques, body measurement, basic seam construction and finishing.

Learning Outcomes

The students would be able to:

- Classify textile fibres and list suitable examples.
- Describe the basic properties, fabric characteristics and end uses of common textile fibres and fabrics.
- Identify, describe and use the basic applied textile design techniques and categorise major Indian textile crafts as embroidered, dyed, painted/printed, and woven.
- Categorise garments and explain factors influencing garment design
- Define the essential sewing and pattern-making terminology
- Apply correct procedures for taking body measurements
- Identify and explain parts of a sewing machine, analyse common defects, and suggest suitable remedies, including proper care and safety measures.
- Demonstrate basic hand stitches and attach fasteners using appropriate techniques.
- Construct and finish plain seams using suitable seam finishing methods.