

Tolani College of Arts and Science, Adipur

Managed by: Gandhidham Collegiate Board, Adipur

Affiliated to: KSKV Kachchh University, Bhuj

Detailed Syllabus for Lab Assistant (Specific Subject: Home Science)

UNIT 1 – Food Science & Food Service Management

Food science and nutrition.

Properties of food – physical and chemical properties

Quality evaluation of foods- objectives and subjective.

Effects of cooking and processing techniques on nutritional components and other physical parameters, food preservation and application.

Food pigments and additives.

UNIT 2 – Nutrition & Dietetics

Food groups – balanced diet, food pyramid, macro and micro nutrition.

Nutrients-role of nutrients in the body, nutrient deficiencies and requirements for Indians.

Public health nutrition

Nutrition through life span-physiological changes, growth and development from conception to adolescence, nutritional needs and dietary guidelines for adequate nutrition through the life cycle, nutrition concerns.

UNIT 3 – Textiles

Textile terminologies- fibre, yarn, weave, fabric etc., classification of fibres, yarns and weaves, Identification of fibres and weaves.

Manufacturing process of major natural and manmade fibres, properties, and their end uses.

Different methods of fabric construction-woven, knitted and non-woven fabrics, their properties and end uses.

Textiles finishes-classification, processing and purposes of finishes.

UNIT 4 – Apparel Design

Body measurements-procedure, need, figure types and anthropometry.

Equipment and tools used for manufacturing garments-advancements and attachments used for sewing machines. Types of machines used and their parts.

Elements and principles of design and its application to apparel. Illustrations and parts of garments.

Fashion-Terminologies, fashion cycle, fashion theories, fashion adoption, fashion forecasting and factors affecting fashion.

UNIT 5 – Resource Management & Consumer Issues

Management concept, approaches, management of time, energy, money, space, motivating factors, motivation theories, and decision making.

Functions of management-planning, supervision, controlling, organising, evaluation, family life cycle stages, availability and use of resources.

Resources-classification, characteristics, factors affecting use, resource conservation, time management, work simplification techniques, classes of change, fatigue and its management.

Management of natural resources-land, forest, water, air, water harvesting, municipal solid waste management, the concept of sustainable development, SDGs.

UNIT 6 – Housing & Interior Design

Design fundamentals – elements of art, principles of design, principles of composition.

Colour – dimensions of colour, psychological effects of colour, colour schemes, and factors affecting the use of colour.

Space planning and design-housing need and important principles of planning spaces, types of house plans, the economy in construction, and planning for different income groups.

Building regulations-norms and standards, zoning, housing for special groups and areas, and housing finance.

Housing and environment- building materials- impact on the environment, green rating systems, energy efficiency in buildings, energy auditing, indices of indoor comfort.

UNIT 7 – Child/Human Development

Principles of growth and development, care during pregnancy and prenatal and neonatal development.

Theories of human development and behaviour.

Early childhood care and education – activities to promote holistic development.

Influence of family, peers, school, community and culture on personality development.

Children and persons with special needs, care and support, special education, prevention of disabilities, and rehabilitation.

UNIT 8 – Family Studies

Dynamics of marriage and family relationships.

Family welfare approaches, programmes and challenges, and role in national development.

Domestic violence, marital disharmony, conflict, resolution of conflict.

Parent education, positive parenting, and community education.

Family disorganisation, single-parent families.

UNIT 9 – Communication for Development

Basics of communication- nature, characteristics, functions, process, models, elements, principles, barriers, perception, persuasion and empathy, types of communication, levels (settings) of communication transactions, the process of listening.

Communication systems and communication theories- human interaction theories, mass communication theories, message design theories, communication systems, culture and communication.

Concept of development- theories, models, measurement and indicators of development.

Concept of development- communication models and approaches, diffusion and innovation, mass media, social marketing.

UNIT 10 – Extension Management & Community Development

Historical perspectives of extension–genesis of extension education and extension systems in India and other countries, objectives of extension education and extension service, philosophy and principles of extension programme development.

Programme management- needs assessment, situation analysis, planning, organisation, implementation, monitoring and evaluation.

Extension methods and materials- interpersonal, small and large group methods, audiovisual aids- need, importance, planning, classification, preparation and field testing, use and evaluation of audio-visual materials.

Curriculum development and planning for extension education and development activities, Bloom's taxonomy of educational objectives and learning.