

UNIVERSITY OF DELHI
Department of Home Science
B.Sc (Prog.) Home Science
(SEMESTER - I)

based on

Undergraduate Curriculum Framework 2022 (UGCF)

(Effective from Academic Year 2022-23)



University of Delhi

B.Sc (Prog.) Home Science
EC (1262)-18.08.2022

Course Title	Nature of the Course	Total Credits	Components			Eligibility Criteria/ Pre-requisite	Annexures (Course content and references)
			Lecture	Tutorial	Practical		
Introduction to Resource Management	DSC HP 101	4	3	0	1	Class XII	Annexure I
Fashion Concepts	DSC HP 102	4	3	0	1	Class XII	Annexure II
Introductory Life Science for Home Science	DSC HP 103	4	2	0	2	Class XII	Annexure III

Care and well-being of the Lifespan	EG (1262)-1808-2022 001	4	3	0	1	Class XII	Annexure IV
Fundamentals of Human Nutrition	GE HS 005	4	3	0	1	Class XII	Annexure-V

Training and Capacity Building	EC (1262)-18.08.2022 GE HS 012	4	3	0	1	Class XII	Annexure VI
Sustainable Fashion	GE HS 013	4	3	0	1	Class XII	Annexure VII
Visual Display Design	GE HS 020	4	3	0	1	Class XII	Annexure VIII

DSC HP 101
INTRODUCTION TO RESOURCE MANAGEMENT

Credit: 4 (Theory 3; Practical 1)
Theory 45 Periods; Practical 30 Periods

Learning Objectives

1. To comprehend the fundamentals of resource management, their purpose and utilization in today's context and conservation approaches.
2. To understand the functions and processes of management in a scientific manner for optimum use of resources.

Course Outcomes

After completing this course, students will be able to:

1. Comprehend the concept and fundamentals of resource management in a changing scenario.
2. Acquaint themselves with the available resources, their uses and conservation approaches.
3. Utilize resources in an efficient and judicious manner.
4. Understand the functions and processes of management in a scientific manner for the optimum use of resources.

THEORY

(Credits 3; Periods 45)

<p>Unit I: Basics of Management</p> <p>Unit Description: This unit will develop understanding regarding the concept of management and role of motivation in management.</p>	<p>No. of Periods</p> <p>12</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Concept, nature, universality and scope of management ● Theories and Approaches to Management ● Ethics in management ● Motivation in management 	

<p>Unit II: Understanding Resources</p> <p>Unit Description: This unit will acquaint students with various resources and their use in relation to different stages of family life cycle.</p>	<p>9</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Meaning, classification and characteristics of resources. ● Resource conservation- maximizing use of resources, factors affecting utilization of resources. ● Family life cycle in context of resource use: Time, Energy, Money. 	
<p>Unit III: Functions of Management</p> <p>Unit Description: Students will be able to develop complete understanding of different management functions and their importance in the process of management.</p>	<p>12</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Decision Making: Concept, significance and steps involved in decision-making process. ● Planning: Nature and characteristics, classification of plans & steps in planning. ● Organizing: Concept, significance and steps involved in organizing process. ● Supervision: Types of supervision (directing & guiding), factors of effective supervision. ● Controlling: Types of control, steps in controlling, requirements of effective control. ● Evaluation: Types and steps of evaluation. 	
<p>Unit IV: Time and Energy Management</p> <p>Unit Description: This unit will orient the students towards application of management processes to time and energy as important resources.</p>	<p>12</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Time Management: Concept, Tools of time management, types of time plans, Steps in making a time plan. ● Energy Management: Concept, principles of body mechanics, types of fatigue. ● Work Simplification: Techniques, Classes of Change. 	

Essential Readings

1. Goel, S. Ed. (2016). *Management of resources for sustainable development*. New Delhi: Orient Blackswan Pvt. Ltd.
2. Moore, T. J. (2021). *Family resource management* (4th ed.), ISBN-13: 978-1544370620.
3. Chhabra, T.N. (2020) *Business Organization & Management*. ISBN: 9789385071102

4. Griffin, R. W. (2016). *Fundamentals of Management*. Cengage Learning.
5. Griffin, R. W. (2013). *Management: Principles and practices (11th ed.)*. South-Western Cengage Learning.
6. Rao, V.S. P. (2008). *Principles & practice of management*. Konark Publishers Pvt. Ltd.
7. Koontz, H., & O' Donnel, C. (2005). *Management: A systems and contingency analysis of managerial functions*. New York: McGraw-Hill Book Company.

Suggested Readings

1. Kreitner, R. (2009). *Management Canada*: Houghton Mifflin Harcourt Publishing Company.
2. Robbin, S.P. (2009). *Fundamentals of management*. Pearson Education.
3. Steidl, R. & Bratton, E. (1968). *Work in the Home*. USA: John Wiley & Sons, Inc.

**PRACTICAL
(Credit 1; Periods: 30)**

Unit I: Identification and Development of managerial competencies	No. of Periods 15
<p>Activities:</p> <ul style="list-style-type: none"> ● Micro Lab and Who am I ● SWOT analysis <ul style="list-style-type: none"> - Self - Case studies: Individuals - Case studies: Organizations ● Building Decision making abilities ● Team building management games ● Decision Making through Case Analysis 	
Unit II: Time and Energy Management	15
<p>Activities:</p> <ul style="list-style-type: none"> ● Time Management: <ul style="list-style-type: none"> - Evaluation of time plans through case analysis: <ul style="list-style-type: none"> o Case Study - 1 o Case study - 2 - Analysis of time use pattern of self - Preparation and evaluation of time plans ● Work improvement using time and motion study techniques <ul style="list-style-type: none"> - pathway chart or travel chart / process chart - observe, record, and analyze an activity. 	

- pathway chart or travel chart / process chart - observe, record, and analyze an activity with improvement.	
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Essential Readings

1. Goel, S. Ed. (2016). *Management of resources for sustainable development*. New Delhi: Orient Blackswan Pvt. Ltd, ISBN: 9788125063490, 9788125063490.
2. Arora, R., Magu, P., Singh, P., Meghna, Gupta, S.(2013). *Resource Management: An Introductory Manual*. R. Gangadharan of Elite Publishing House Pvt. Ltd., Daryaganj, ISBN No: 978-81-88-901-50-0.
3. Drucker, P. F. (2007). *Management: Tasks, responsibilities, practices*. Transaction Pub, ISBN-13: 978-0750643894.

Annexure II

DSC HP 102
FASHION CONCEPTS

Credit: 4 (Theory 3; Practical 1)

Theory 45 Periods; Practical 30 Periods

Learning Objectives

1. To understand the basics of fashion and the fashion industry.
2. To impart knowledge about functions and theories of clothing.
3. To develop sensitivity towards selection of garments and garment design.

Course Outcomes

1. Identify the role and functions of clothing and recognize the factors affecting the selection and evaluation of clothing.
2. Explain the concept of fashion, its terminology, sources and factors affecting it.
3. Being aware of global fashion centers.
4. Apply the knowledge of elements and principles in design interpretation.

THEORY
Credits 3; Periods 45

<p>Unit I: Clothes and Us</p> <p>Unit Description: This unit introduces the student to key concepts of how and why people started to wear clothes, and what factors are at play in the current times for selecting clothing for the individual.</p>	<p>12</p>
<ul style="list-style-type: none"> ● Clothing functions and theories of origin ● Clothing terminology ● Individuality and conformity, conspicuous consumption and emulation ● Body shapes ● Selection and Evaluation of quality of ready-made garments ● Selection of clothes for self 	
<p>Unit II: Understanding Fashion</p> <p>Unit Description: This unit will deal with the basic concepts in understanding fashion, from key terms to the why and how of fashion and more contemporary knowledge of fast and slow fashions.</p>	<p>12</p>

<ul style="list-style-type: none"> ● Fashion cycle ● Terminology ● Theories of fashion adoption ● Sources of fashion research ● Factors favouring and retarding fashion ● Role of a Designer ● Fast Fashion: Characteristics of Fast Fashion, Fast Fashion and Consumer ● Slow Fashion: Characteristics, Slow Fashion as a process, importance of changing from fast to slow fashion. 	
<p>Unit III: Design in Garments</p> <p>Unit Description: This unit orients the student from a design perspective in garments; the various elements that comprise a garment and the various principles that govern and guide in developing a good design.</p>	<p>9</p>
<p>Unit IV: Fashion</p> <p>Unit Description: This unit will apprise the student on the forecasting process for fashions, functioning of the industry and various garment categories for production</p>	<p>12</p>
<ul style="list-style-type: none"> ● Structure and Functioning of Fashion Industry ● Forecasting: Fashion seasons ● Garment Categories ● Fashion Centres ● Careers in Fashion 	

Essential Readings

1. Brown, Patty, Rice J., 1998, *Ready to Wear Apparel Analysis*. Prentice Hall.
2. Marshall S G, Jackson H O, Stanley MS, Kefgen M & Specht T, 2009, *Individuality in Clothing & Personal Appearance, 6th Edition*, Pearson Education, USA.
3. Tate S.L., Edwards M.S., 1982, *The Complete Book of Fashion Design*, Harper and Row Publications, New York.
4. Fringes G.S., 1994, *Fashion From Concept to Consumer, 6th edition*, Prentice Hall, New Jersey.

Suggested Readings

1. R. Andrew, 2018, *Key Concepts for Fashion Industry*, Bloomsbury Publishing, India.
2. Reader's Digest (Eds.). 2002, *New Complete Guide to Sewing*, (Canada) Ltd. Montreal.

PRACTICAL
(Credit 1; Periods: 30)

<p>Unit I: Hand stitches</p> <p>This unit will impart hands-on skill for making small products using upcycling of used articles of clothing or home textiles and how value addition may be achieved in garments by using popular embroidery stitches.</p>	<p>15</p>
<ul style="list-style-type: none"> ● Prepare samples of - <ul style="list-style-type: none"> - Basic hand stitches for creating a seam and edge finishing. - Decorative Hand Stitches <p>Develop an upcycled product.</p>	
<p>Unit II: Elements & Principles of Design</p> <p>This unit will train the students to identify the various elements of a design that a garment uses and the principles that create an aesthetic design. Eventually a student will be able to effectively use these elements and principles of design to create well designed garments.</p>	<p>15</p>
<ul style="list-style-type: none"> ● Create a collection of garments for analysis from print and visual media. ● Analyze the various elements that comprise the garments. ● Identify the various principles of design used in the selected garments 	

DSC HP 103
INTRODUCTORY LIFE SCIENCES FOR HOME SCIENCE

Credit: 4 (Theory 2; Practical 2)
 Total Lectures: Theory 30 periods; Practical 60 periods

Learning Objectives

1. To introduce students to animal and plant diversity, and its significance for human life.
2. To make students aware of the fundamentals of cell structure, physiology and growth .
3. To enable students to appreciate the interdependence of ecosystems and its environmental underpinnings.
4. To make students aware of basics of immunology, genetics and biotechnological applications.

Course Outcomes

1. The students would be able to identify animals and plants of human concerns and ecological importance.
2. The students would be able to appreciate the existential link between plants, microbes, animals and humans.
3. The students would develop hands-on experience on plant propagation methods along with a functional understanding of plant physiology.
4. The students would understand the importance of prenatal screening, and biotechnology.
5. The student would be able to make a pedigree chart of a family and identify the inheritance pattern of a character.

THEORY
(Credits 2; Periods 30)

Section A – Botany	(Number of Lectures)
Unit I: Introduction to the Plants: Cytology, Morphology and Economic Botany Unit description: Fundamentals of Plant diversity, Plant morphology and Plant Resource Utilization	8
<i>Subtopics</i> <ul style="list-style-type: none"> ● Introduction to Plant Diversity ● Types of a cell: Prokaryotes and Eukaryotes 	

<ul style="list-style-type: none"> ● Plant cell- An Overview, Types, Structure and Function ● Angiosperm plants: Morphology (Parts of plants with modifications and Life cycle) ● Plant Nutrition and Soil: Essential Elements and Functions, Nutrient cycles, Biofertilizers, Bio-enzymes ● Introduction to Economically important plants: Fibre Crops, Medicinal Plants, Oil Crops, Timber Plants, Food Crops 	
<p>Unit II: Plant Physiology, Propagation of Plants and Gardening Unit description: Basics of plant physiology, Plant propagation and Gardening</p>	7
<p><i>Subtopics</i></p> <ul style="list-style-type: none"> ● Important physiological processes (Diffusion, Osmosis and plasmolysis) ● Brief account of transpiration, photosynthesis and respiration in plants ● Seed Propagation ● Vegetative Propagation: Cuttings – stem leaf and root, Layering, Grafting ● Gardening: Concept and Types with example of Kitchen Garden, Community gardens, and Maintenance of Plants ● Role of Plants in Air pollution Control ● Introduction to Organic farming , Climate smart agriculture 	
<p>Section B – Zoology</p>	
<p>Unit III: Animal Diversity and Human needs Unit description: Animal diversity and importance in human life</p>	8
<p><i>Subtopics</i></p> <ul style="list-style-type: none"> ● Types, Structure and Function of Animal Cell and its Components ● Animals and their ecosystem services (role of animals in pollination, seed dispersal, soil health, food security, domestic animals) ● Animal diversity in human environment: threats and conservation, human-animal conflict ● Economic importance and control of common household pests e.g. cockroach, housefly, mosquitoes and termites ● Identification and control of important stored grain pests ● Zoonotic disease: Transmission, Prevention and Control (Taeniasis, Ascariasis, Malaria, COVID-19, Bird flu, Rabies, Tuberculosis) 	
<p>Unit IV: Genetics, Immunity and Biotechnology Unit description: Basics of genetics, birth defects, immunity and biotechnology</p>	7
<p><i>Subtopics</i></p> <ul style="list-style-type: none"> ● Structure and Function of Genes and Chromosome ● Laws of Heredity and sex linked inheritance 	

<ul style="list-style-type: none">● Case Studies: Inheritance of Thalassaemia, Sickle Cell Anaemia and Phenylketonuria (PKU)● Overview of Birth defects: Types and Causes with example like Down's syndrome etc.● Basics of Human Immunity● Introduction to Biotechnology: Application in Animal Improvement and Medicines	
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Practical

(Credit 2; Periods 60)

SECTION A- BOTANY

1. Study the role of sunlight during photosynthesis
2. Study the rate of transpiration on both the surfaces of leaves
3. Assessment of soil quality: determination of soil pH, test for nitrates, nitrites
4. Preparation of soil mixture, potting and re-potting
5. Raising of healthy seedlings in a nursery bed
6. Propagation of plants through stem cutting, air layering and underground layering
7. Propagation of plants by approach grafting and veneer grafting
8. Identification and classification of economically important Food Crops, Medicinal, Fibre crops, Timber Plants and Oil Crops
9. Identification, care and maintenance of important plants in controlling air pollution
10. Preparation of temporary mount of onion peel
11. Preparation of temporary mount of epidermis of *Rhoeo* plant to study distribution of stomata on upper and lower surface of leaf

SECTION B- ZOOLOGY

1. Study of cell structure through temporary slides: Blood Cells
2. Study of cell structure through temporary slides: Neurons
3. Study of cell cycle stages through permanent slides: Mitosis
4. Study of cell cycle stages through permanent slides: Meiosis
5. Identification of few common animal and birds in the human environment
6. Estimation of species richness and abundance of animal/ birds in the human environment using point count method
7. Estimation of species richness and abundance of animal/ birds in the human environment using transect method
8. Identification of life cycle stages of two common household pests: Termite and Mosquito
9. Methods of pest control and its application in houses (through audio/ visual/ seminar/ visit)

10. Pedigree chart preparation & analysis
11. Demonstration of vermicomposting: preparation and monitoring of the setup at home
12. Case study of a zoonotic/ parasitic disease: COVID-19 pandemics/ bird flu

ESSENTIAL READINGS

1. Jordan E. L. and Verma P. S. 2009. Invertebrate Zoology, S. Chand and Co. Ltd, New Delhi.
2. Raven P. and Johnson G. 2010. Biology. Tata McGraw Hill Publication, New Delhi.
3. Soni N. K. and Soni V. 2010. Fundamentals of Botany. Tata McGraw Hill Publication, New Delhi.
4. K. Park. 2016. Textbook of preventive and social medicine. Banarsidas Bhanot Publishers.
5. Singh J. S., Singh S. P. and Gupta S. R. 2017. Ecology, Environment Science and Resource Conservation. S.Chand (G/L) & Company Ltd, India.

SUGGESTED READINGS

1. Chadha K. L. 2012. Handbook of Horticulture. ICAR Publication, New Delhi.
2. Gopalaswamianger K.S. 1991. Complete gardening in India. Messers Nagaraj and Co., Madras.
3. Magurran, A.E. 1988. Ecological Diversity and Measurement. Croom Helm Limited, Australia.
4. Gupta R. 2015. Fundamentals of Zoology: Theory and Practice. Elite Publishing House Pvt. Ltd., New Delhi.
5. Hartman H. T and Kester D. 1986. Plant Propagation: Principles and Practices Prentice Hall of India Pvt. Ltd., New Delhi.
6. Kotpal, R. L. 2000. Modern Textbook of Zoology. Rastogi Publications, Meerut.
7. Upadhyay R. 2017. Elements of Plant Science. Elite Publishing House, New Delhi.
8. Viji, U and Gupta, R. 2011. Applied Zoology. Phoenix Publishing House, New Delhi.

Annexure IV

**GE HS 001
CARE AND WELLBEING ACROSS THE LIFESPAN**

Credit: 4 (Theory 3; Practical 1)
Theory 45 Periods; Practical 30 Periods

Learning Objectives

1. To understand the concept of care and well-being across the lifespan and talk in context to the current social world.
2. To demonstrate skills to promote well-being of self and others in the society.
3. To gain familiarity of programmes and policy initiatives present on care and wellbeing in India

Course Outcomes:

1. The student will be able to develop an understanding of the concept and dimensions of care and wellbeing of individuals in the contemporary social world.
2. The student will acquire knowledge of the many influences on care and wellbeing across human lifespan.
3. The student will build capacity to promote wellbeing of self and society at large.
4. The student will be familiar with program and policy initiatives present on care and wellbeing in India.

THEORY
(Credits 3; Periods 45)

<p>Unit I: Care and Human Development Unit Description: The unit offers information about the concept of care across lifespan.</p>	No. of Periods 12
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Definition, concepts & relevance of care ● Vulnerable periods in life that require care ● Principles & components of care ● Psychological, social, emotional and spiritual 	
<p>Unit II: Well-being and Human Development Unit Description: The unit provides information regarding the concept of wellbeing across lifespan, life crises and factors and experiences that promote wellbeing in human development.</p>	9
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Concept of well-being: physical, psychological, spiritual ● Life crises and well-being ● Factors & experiences that promote well-being 	
<p>Unit III: Care and wellbeing: Birth to adolescent years Unit Description: The unit focuses on the care and wellbeing from the period before birth up to the adolescent years.</p>	12
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Antenatal care: maternal, fetal and neonatal care ● Care of the young child ● Adolescent reproductive health and wellbeing ● Community and school health programs ● Nutrition and health for all ages 	
<p>Unit IV: Care and wellbeing Adulthood and Aging Unit Description: The unit addresses the care and wellbeing issues of the caregiver, role of the family, health, medical and insurance schemes and provisions for the care of the elderly.</p>	12
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Adulthood and old age: changing and adapting ● Stress, coping strategies and well-being of caregivers ● Counselling, yoga and meditation techniques ● Institutions, schemes and facilities for older adults 	

Essential Readings

1. Daaleman, Timothy & Helton, Margaret (2018). *Chronic Illness Care: Principles and Practice*: Springer. (Chapters 9- 12 & Chapters 21-27) NICHD Early Child Care Research Network. (2005).
2. *Child Care and Child Development: Results From the NICHD Study of Early Child Care*. New York: Guildford Press. (Chapters 2-6)
3. Berk, L. (2013). *Child development*. 9th ed. Boston: Pearson.
4. Ronda C. Talley, Rhonda J. V. Montgomery, *Caregiving: A Developmental, Life-Long Perspective*, Pages 3-10
5. Ronda C. Talley, Lydia LaGue (2013) *Caregiving Across the Lifespan: Research . Practice . Policy*, Springer.
6. Santrock, J. W. (2011). *Life-span development*. New York: McGraw-Hill.
7. Singh, A. (Ed.) 2015. *Foundations of Human Development*. New Delhi: Tata McGraw- Hill.
8. Markin, L. (2013). *Health and Well-Being across Life Course*. Sage Publication, Inc. Chapter 2-7
9. Asumadu-Sarkodie, Samuel. (2012). *Nutritional Problems and Intervention Strategies in India*. (All Chapters)
10. Chao, R.C. (2015). *Counselling Psychology: An Integrated Positive Psychological Approach*. (Chapter 1-4)
11. Institute of Public Health in Ireland and the Centre for Effective Services (2016) *Improving Health and Wellbeing Outcomes in the Early Years: Research and Practice* Dublin: Institute of Public Health in Ireland and the Centre for Effective Services. (All Chapters).
12. Kamerman, S.B., PIPPS, S., Ben-Arieh, A. (2010). *From Child Welfare to Child Well-Being*. Springer Publication. (Chapter 2, 5, 7, 12, 23)

Suggested Readings

1. Singhi, P. (1999). *Child health & well-being: Psychological care within & beyond hospital walls*. In T.S. Saraswathi (Ed.). *Culture, socialization and human development*. New Delhi: Sage.
2. *Childhood in south Asia: A critical look at issues, policies and programmes*. Conn.USA: Information Age.

PRACTICAL
(Credit 1; Periods 30)

<ul style="list-style-type: none">● Use of various tools to understand care needs at different stages- childhood, adolescence, adulthood: Interview, Observation, Movies and Documentaries● Lectures/ Talks/workshops on- Self-care and well-being, Counseling and Yoga/meditation● Profile an organization to a senior citizen home/childcare institution to study care and well-being● Psychometric tests- Well-being scale, Self-concept tests, Subjective well-being scale (WHO), any 2 personality tests	Total No. of Periods 30
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Annexure-V

**GE HS 005
FUNDAMENTALS OF HUMAN NUTRITION**

Credit: 4 (Theory 3; Practical 1)
Theory 45 Periods; Practical 30 Periods

Learning Objectives

1. To understand the relationship between food, nutrition and health.
2. To classify foods into various food groups and explain the concept of a balanced diet.
3. To describe the importance of various nutrients as well as list their food sources.
4. To be able to plan and prepare nutritious meals for an adult.

5. Course Outcomes

1. Relate how food affects health.
2. Classify foods into various food groups and explain the concept of a balanced diet.
3. Understand the importance of various nutrients and how these can be obtained from the diet.
4. Describe the considerations for planning and preparing balanced and nutritious meals for adults.

**THEORY
(Credits 3; Periods 45)**

Units	No. of Periods
Unit I: Basic Concepts in Nutrition Unit Description: Understanding basic terminology used in nutritional sciences and the importance of nutrition	10
Subtopics: <ul style="list-style-type: none"> ● Basic terms used in nutrition ● Understanding relationship between food, nutrition and health ● Functions of food-Physiological, psychological and social ● Basic food groups and concept of balanced diet 	
Unit II: Nutrients Unit Description: Functions, dietary sources, requirements, effects of deficiency and/ or excess consumption of the various nutrients.	20
Subtopics: <ul style="list-style-type: none"> ● Energy- Concept of energy balance ● Carbohydrates and dietary fibre ● Lipids ● Proteins ● Fat soluble vitamins ● Water soluble vitamins ● Minerals 	
Unit III: Healthy Eating Unit Description: Nutritional concerns and dietary guidelines for healthy eating for adults.	15
Subtopics: <ul style="list-style-type: none"> ● Factors influencing food choices ● Planning balanced meals and diets ● Nutritional concerns for adults ● Dietary guidelines for prevention of diet related lifestyle disorders ● Importance of physical activity and other lifestyle factors 	

Essential Readings

1. Chadha R and Mathur P eds. (2015). Nutrition: A Lifecycle Approach. Hyderabad: Orient BlackSwan.
2. Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2013). Textbook of Nutrition and Dietetics. Delhi: Phoenix Publishing House Pvt. Ltd.
3. Longvah T, Ananthan R, Bhaskarachary K and Venkaiah K (2017). Indian Food
4. Composition Tables. National Institute of Nutrition, Indian Council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare, Government of India, Hyderabad.

5. NIN (2011). Dietary Guidelines for Indians- A Manual. Second edition. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
6. Seth V, Singh K, Mathur P (2018). Diet Planning Through the Lifecycle Part I: Normal Nutrition- A Practical Manual. 6th Edition. Delhi: Elite Publishing House.

Suggested Readings

1. Byrd-Bredbenner C, Moe G, Beshgetoor D, Berning J (2013). Wardlaw's Perspectives in Nutrition, International Edition, 9th edition. New York: McGraw- Hill.
2. ICMR (2020). Nutrient Requirements for Indians-Recommended Dietary Allowances and Estimated Average Requirements. Published by National Institute of Nutrition, Hyderabad.
3. Sethi P, Lakra P. Aahar Vigyan, Poshan evam Suraksha (Hindi); First Ed; 2015; Delhi: Elite Publishing House (P) Ltd.
4. Siddhu, A, Bhatia, N, Singh, K, Gupta, S (2017). Compilation of Food Exchange List, Technical Series 6, Lady Irwin College, University of Delhi. Delhi: Global Books Organisation.
5. Suri S and Malhotra A (2014). Food Science, Nutrition and Safety. Dorling Kindersley (India) Pvt. Ltd, India

PRACTICAL (Credit 1; Periods 30)

Practical	No. of Lectures
1. Making the right food choices <ol style="list-style-type: none">a. Nutrient rich sources from different food groupsb. Concept of high fat, salt, sugar (HFSS) foodsc. Reading food labels	10
2. Planning a nutritious meal for adults <ol style="list-style-type: none">a. Concept of food exchangesb. Calculating nutritional quality of dietsc. Balancing meals according to nutrient requirementsd. Healthy snacking options	20

Annexure VI

**GE HS 012
TRAINING AND CAPACITY BUILDING**

Credit: 4 (Theory 3; Practical 1)
Theory 45 Periods; Practical 30 Periods

Learning Objectives

1. To study the concept and significance of training and capacity building.
2. To understand the training process and the functions of different phases of training.
3. To know how different training approaches can be used to achieve various development goals.
4. To develop skills in designing, implementing and evaluating training programmes.

Course Outcomes

1. The student will be able to know the importance and scope of training for development.
2. The student will be able to learn the functions of different phases of the training process.
3. The student will be able to understand and critically evaluate the different training approaches and methodologies.
4. The student will be able to develop skills in planning, executing and evaluating training programmes for different stakeholders.

THEORY
(Credits 3; Periods 45)

<p>Unit I: Training: Concept and Role in Development</p> <p>Unit Description: This Unit explores the concept, significance and different agencies involved in training for development. The unit focuses on adult learning and various approaches to train them. The Unit discusses the importance of evaluation and follow-up of training programmes. Various NGOs, GOs and Corporate initiatives in community development will also be discussed.</p>	<p>No. of Periods</p> <p>9</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Nature, scope, advantages and limitations of training ● Goals, approaches and types of training ● Characteristics and principles of adult learning ● Government policies for training and capacity building of different stakeholders ● Agencies involved in training and development - NGOs, GOs and Corporate 	
<p>Unit II: Roles and Responsibilities and Self-development of a Trainer</p> <p>Unit Description: This Unit elaborates on the roles and responsibilities of a trainer. The various types of skills required of a trainer will be discussed. Concepts of self, self-development and personality development of a trainer will also be covered.</p>	<p>12</p>

<p>Subtopics:</p> <ul style="list-style-type: none"> ● Roles and responsibilities of a trainer before, during and after a training programme ● Soft skills required by a trainer - communication, group mobilization leadership, team building, decision-making, networking and problem solving ● Technology-based skills - ICTs for facilitating the various aspects of the training process ● Concept of self and self-development of a trainer ● Need for personality development 	
<p>Unit III: Methods and Techniques of Training Unit Description: This Unit provides an insight into the different types of training methods and techniques which can be used in offline and online training programmes, including training in blended mode.</p>	12
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Tools and techniques for training (Brainstorming, Buzz Groups, Panel Discussion, Role Play, Focus Group Discussions, Films, Games and Stories) ● New techniques and innovations in training methods especially using technology 	
<p>Unit IV: Designing, Executing and Evaluating Training Modules Unit Description: This Unit focuses on analyzing training modules developed by different organizations - Government, National and International NGOs. The process of developing, mobilizing resources and implementing training programmes will be discussed. It also focuses on different ways of evaluating training programs for different stakeholders involved in the field of development.</p>	12
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Analysis of training programmes for different stakeholders ● Tools and techniques for training needs assessment ● Understanding various learning goals and outcomes for specific target groups ● Development of Training modules and materials ● Implementation of training programmes ● Methods of evaluation and follow-up of training 	

Essential Readings

1. Agochiya D. (2002). Every Trainer's Handbook. New Delhi, Sage publisher.
2. Dhama, O.P. and Bhatnagar, O.P. (2003). Education and Communication for Development. New Delhi.
3. Gardner, A. & Brindis, C. (2017). Advocacy and Policy Change Evaluation: Theory and Practice. USA: Stanford Business Books. ISBN-13: 978-0804792561.
4. PRIA. (1998). A Manual for Participatory Training Methodology in Development. New Delhi: Society for Participatory Research in Asia.
5. PRIA (2002). Methods of Participatory Training. New Delhi. Participatory Research in Asia.

Suggested Readings

1. Bhatia S.K,2005, Training & Development; Concepts and Principles, Ch-1(3-8), ch-2(9-26), ch-3(28-38).
2. James W. Thacker C, (2004). Effectiveness Training-Systems, Strategies and Practices. Pearson Education.
3. Lyton R and PareekU. (1990). Training for Development. New Delhi, Vistaar Publications.
4. Subedi, N R, (2008). Advocacy Strategies and Approaches: A Training of Trainers Manual. International.
5. UNICEF. (2010). Advocacy toolkit. A guide to influencing decisions that improve children's lives.

PRACTICAL **(Credit 1; Periods 30)**

<ul style="list-style-type: none">● Exercises to understand roles and responsibilities of a trainer● Undertake activities in building skills of a trainer.● Undertake analysis of a variety of training modules.● Development and conduct of training modules for specific client groups.● Design, production and use of Training methods and materials.● Evaluation of training programmes● Visit to organizations involved in training and capacity building	No. of Periods 30
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Annexure-VII

GE HS 013 **SUSTAINABLE FASHION**

Credit: 4 (Theory 3; Practical 1)
Theory 45 Periods; Practical 30 Periods

Learning Objectives

1. Spreading awareness about issues and challenges of sustainable fashion
2. Make students conscious consumers of textiles and apparel
3. Inculcating habits of reducing textile waste generation

Course Outcomes

1. The student will be able to gain knowledge of issues and challenges related to over consumption and non-sustainable fashion.

2. The student will be able to learning to choose garment consciously and become informed consumer
3. The student will be able to using green laundry practices to help environment
4. The student will be able to increasing life cycle of garments for less waste generation

THEORY
(Credits 3; Periods 45)

<p>Unit I: Fashion & Sustainability Learning aspects of sustainability in relation to fashion and textiles.</p>	<p>No. of Periods 9</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Basics of sustainability ● The Fashion Business & sustainability issues ● Ethical & sustainable fashion in the changing global scenario ● Circular fashion ● Start-ups and big brands dealing with sustainability ● Measuring sustainability – How brands do it 	
<p>Unit II: Green Consumption Factors that should be kept in mind while selecting and purchasing apparel</p>	<p>12</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Volumes of textile waste: Over consumption challenges ● Fashion based on values ● Locally made, globally relevant ● Local and connected: Designing with local artisans ● Reducing the speed in fashion consumption: Slow fashion, Durability, Appropriateness, Multifunctional garments, Trans-seasonal garments, emotionally durable design ● Standards, labels and organisations dealing with sustainable textiles and apparel 	
<p>Unit III: Ethical care and Maintenance Green practices for laundry and care of apparel.</p>	<p>12</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Laundering frequency: Reducing consumers' need to clean ● Laundry detergents and softeners: Effectiveness and environmental concerns ● Machine vs line drying: Energy costs vs consumer needs ● Special care laundry: Environmental impacts and changing consumer demands 	

<ul style="list-style-type: none"> ● More efficient laundering practices ● Designing sustainable clothing that enables: low-impact care, extended use 	
<p>Unit IV: Intelligent Disposal Ways to increase the life of garments to reduce waste generation.</p>	12
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Slowing the flow of materials ● Take-back schemes ● Waste management strategies: Reuse of goods, repair and reconditioning of goods, recycling of goods, zero waste pattern ● Collaborative consumption: Sharing, pass me down, give away ● Vintage Clothing: The world of second-hand clothing ● Traditional Practices in Indian culture leading to sustainable consumption 	

Essential Readings

1. Fletcher, K., & Grose, L. (2012). Fashion & sustainability: Design for change. Hachette UK
2. Fletcher, K. (2013). Sustainable fashion and textiles: design journeys. Routledge.
3. Gwilt, A., & Rissanen, T. (2012). Shaping sustainable fashion: Changing the way we make and use clothes. Routledge.
4. Jacques, P. (2020). Sustainability: the basics. Routledge.
5. Gardetti, M.A., & Torres, A.L. (Eds.). (2013). Sustainability in Fashion and Textiles: Values, Design, Production and Consumption (1st ed.). Routledge.
6. Pratibhan, M. Ed. (2017); Sustainability in Fashion & Apparels (Challenges & Solutions); Woodhead Publishing

Suggested Readings

1. Almeida, L. (2015). Ecolabels and organic certification for textile products. A Roadmap to sustainable textiles and clothing (pp. 175-196). Springer, Singapore.
2. Muthu, S. S. (Ed.). (2014). Roadmap to sustainable textiles and clothing: Eco-friendly raw materials, technologies, and processing methods. Springer.
3. Minney, S. (2011). Naked fashion: The new sustainable fashion revolution. New International
4. Mahapatra N. N. (2015); Textiles & Environment: Woodhead Publishing

PRACTICAL
(Credit 1; Periods 30)

<p>Analyzing Market and Consumer Practices:</p> <ul style="list-style-type: none"> ● Market survey to evaluate presence of Sustainable garments in Indian retail market: Identify any one Multiband apparel outlet and analyze brands selling sustainable clothes, green standards marked on labels and any other information available on labels that talks about sustainability in production of that garment. ● Analyzing personal wardrobe to assess individual buying practices ● Analyzing personal laundry practices and evaluating its impact on the environment. ● Analyzing personal garment disposal practices and finding ways to reduce the waste generation. 	<p>No. of Periods</p> <p style="text-align: center;">20</p>
<p>Case Study:</p> <ul style="list-style-type: none"> ● Case study of an Indian Apparel Brand that is promoting Sustainable fashion. ● Case study on any one model of Collaborative consumption. 	<p style="text-align: center;">10</p>

Suggested Readings

1. Kaur, J., & Singh, G. (2021). Cool Branding for Indian Sustainable Fashion Brands. Social and Sustainability Marketing: A Casebook for Reaching Your Socially Responsible Consumers through Marketing Science, 115.
2. Gwilt, A. (2020). A practical guide to sustainable fashion. Bloomsbury Publishing.

Annexure-VIII

**GE HS 020
VISUAL DISPLAY DESIGN**

Credit: 4 (Theory 3; Practical 1)
Theory 45 Periods; Practical 30 Periods

Learning Objectives

1. To introduce the concept and significance of visual merchandising in store design.
2. To impart knowledge regarding different types of visual displays and ways of achieving them.
3. To develop skill in creating aesthetically pleasing visual displays.

Course Outcomes

1. The student will be able to apprehend the key terms and principles involved in the components of visual merchandising.
2. The student will be able to understand the importance of visual merchandising and attractive visual display in communicating with customers.
3. The student will be able to create aesthetic visual displays on different themes in store design.

THEORY
(Credits 3; Periods 45)

<p>Unit I: Introduction to Visual Merchandising Unit Description: The focus of this unit would be on understanding the concept, significance and key elements of visual merchandising.</p>	<p>No. of Periods 7</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Concept and Significance of Visual Merchandising ● Key elements of Visual Merchandising - Store Exterior, Store Layout, Store Interior, Interior display ● Factors Influencing Visual Merchandising ● Role of Visual Merchandiser 	
<p>UNIT II: Store Design Unit Description: This unit attempts to acquaint the students with various store designs, its components and the importance of colour and lighting therein.</p>	<p>13</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Objectives and Characteristics ● Types of store design ● Interior components ● Exterior components ● Color ● Lighting design 	
<p>Unit III: Design Display Unit Description: This unit will orient the students in understanding the various components of design displays.</p>	<p>15</p>
<p>Subtopics:</p> <ul style="list-style-type: none"> ● Concept, Purpose, style and importance of displays ● Types of window displays ● Factors in window display ● Signage and Graphics ● Understanding of display fixtures ● Budgeting 	

<p>Unit IV: Materials and Technologies Unit Description: This unit will acquaint the students with the materials and technologies used in visual display and the global trends.</p>	<p>10</p>
<ul style="list-style-type: none"> ● Selection of materials ● Use of Latest Technologies: Augmented and Virtual reality tools, Robotics ● Global Trends 	

Essential Readings

1. Morgan, T. (2014). Visual Merchandising: Window and in-store displays for retail, Laurence King Publishing, London
2. Bergstrom, B. (2009). Essentials of Visual Communication, Laurence King Publishing, London
3. Poore. J. (1994). Interior Color by Design, Rockport Publishers.
4. Wiley, J. , (2010), Interior lighting for designers, John Wiley & Sons
5. Williams, R. (2007), Visual Communication: Integrating Media, Art, and Science, Routledge Communication Series

Suggested Readings

1. Khaus, K. (2006). Semantic turn a new foundation for design, CRC press
2. Landa, Robin. (2010), Advertising by design: Generating and Designing Creative Ideas Across Media, Second Edition, James Wiley
3. Linton, H. (1999). Color in Architecture: Design Methods for Buildings, Interiors and Urban Spaces, McGraw-Hill

**PRACTICAL
 (Credit 1; Periods 30)**

<p>Unit I: Design Exploration</p>	<p>No. of Periods 12</p>
<p>Activities:</p> <ul style="list-style-type: none"> ● Preparing a portfolio on elements and principles of visual design ● Creating Theme based mood boards 	
<ul style="list-style-type: none"> ● Market survey of materials used in display: accessories, props, signage, backdrop, banners, etc. ● Visit to retail stores for critical assessment of display arrangements. 	

Unit II: Store Design and Displays	18
<p>Activities:</p> <ul style="list-style-type: none"> ● MKS system and techniques of measurement ● Identification and assessment of different layout plans ● Making a layout plan 	
<ul style="list-style-type: none"> ● Prop designing: Identification of types of props, material selection, creating a focal point through prop ● Planning and designing a prop ● Window Display Designing: Identification of types of window displays ● Assessment of selected window display ● Planning and designing a theme based window display ● Costing 	

Essential Readings

1. Morgan, T. (2014). Visual Merchandising: Window and in-store displays for retail, Laurence King Publishing, London
2. Bergstrom, B. (2009). Essentials of Visual Communication, Laurence King Publishing, London
3. Poore. J. (1994). Interior Colour by Design, Rockport Publishers.
4. Wiley, J. , (2010), Interior lighting for designers, John Wiley & Sons
5. Williams, R. (2007), Visual Communication: Integrating Media, Art, and Science, Routledge Communication Series