

BSC. (PROG.) HOME SCIENCE
Category-II

DISCIPLINE SPECIFIC CORE COURSE – 1 (DSC-1) –: INTRODUCTION TO RESOURCE MANAGEMENT

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Introduction to Resource Management	4	3	-	1	Class XII pass	-

Learning Objectives

The Learning Objectives of this course are as follows:

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.

Learning outcomes

The Learning Outcomes of this course are as follows:

The students will be able:

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.

SYLLABUS OF DSC-1

UNIT – I Basics of Management

(9 Hours)

This unit will develop understanding regarding the concept of management and role of motivation in management.

Subtopics:

- Concept, nature, universality and scope of management
- Theories and Approaches to Management
- Ethics in management
- Motivation in management

UNIT – II Functions of Management

(12 Hours)

Students will be able to develop complete understanding of different management functions and their importance in the process of management.

Subtopics:

- 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.

UNIT – III Time and Energy Management (12 Hours)

This unit will orient the students towards application of management processes to time and energy as important resources.

Subtopics:

- 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.

UNIT – IV Prenatal Development (12 Hours)

Students will gain understanding of prenatal through presentations on stages of prenatal development and factors which have an impact.

Subtopics:

- Stages of prenatal development
- Factors affecting prenatal development

Practical component

Unit I: Identification and Development of managerial competencies

Activities:

- Micro Lab and Who am I
- SWOT analysis
- 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

Activities:

- Time Management:
 - Evaluation of time plans through case analysis:
 - 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
 - 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.

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' Donnell, C. (2005). Management: A systems and contingency analysis of managerial functions. New York: McGraw-Hill Book Company.

Suggestive 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.

DISCIPLINE SPECIFIC CORE COURSE – 2 (DSC-2): FASHION CONCEPTS

Credit distribution, Eligibility and Prerequisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
FASHION CONCEPTS	4	3	-	1	Class XII pass	-

Learning Objectives

The Learning Objectives of this course are as follows:

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.

Learning outcomes

The Learning Outcomes of this course are as follows:

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.

SYLLABUS OF DSC- 2

UNIT – I Clothes and Us

(12 Hours)

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.

- 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

UNIT – II Understanding Fashion

(12 Hours)

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.

- 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.

UNIT – III Design in Garments (9 Hours)

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.

UNIT – IV Fashion (12 Hours)

This unit will apprise the student on the forecasting process for fashions, functioning of the industry and various garment categories for production

- Structure and Functioning of Fashion Industry
- Forecasting: Fashion seasons
- Garment Categories
- Fashion Centres
- Careers in Fashion

Practical component – 30 Hours

Unit I: Hand stitches

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.

- Prepare samples of -
- Basic hand stitches for creating a seam and edge finishing.
- Decorative Hand Stitches

Develop an upcycled product.

Unit II: Elements & Principles of Design

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.

- 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

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
3. Clothing & Personal Appearance, 6th Edition, Pearson Education, USA.
4. Tate S.L., Edwards M.S., 1982, The Complete Book of Fashion Design, Harper and Row Publications, New York.
5. Fringes G.S., 1994, Fashion From Concept to Consumer, 6th edition, Prentice Hall, New Jersey.

Suggestive 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.

DISCIPLINE SPECIFIC CORE COURSE – 3 (DSC-3): INTRODUCTORY LIFE SCIENCES FOR HOME SCIENCE

Credit distribution, Eligibility and Prerequisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
INTRODUCTORY LIFE SCIENCES FOR HOME SCIENCE	4	2	-	2	Class XII pass	-

Learning Objectives

The Learning Objectives of this course are as follows:

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.

Learning outcomes

The Learning Outcomes of this course are as follows:

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.

SYLLABUS OF DSC- 3

Section A – Botany

UNIT – I Introduction to the Plants: Cytology, Morphology and Economic Botany (8 Hours)

Fundamentals of Plant diversity, Plant morphology and Plant Resource Utilization

Subtopics

- Introduction to Plant Diversity
- Types of a cell: Prokaryotes and Eukaryotes
- 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

UNIT – II Plant Physiology, Propagation of Plants and Gardening

(7 Hours)

Basics of plant physiology, Plant propagation and Gardening

Subtopics

- 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

Section B – Zoology

UNIT – III Animal Diversity and Human needs

(8 Hours)

Animal diversity and importance in human life

Subtopics

- 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)

UNIT – IV Genetics, Immunity and Biotechnology

(7 Hours)

Basics of genetics, birth defects, immunity and biotechnology

Subtopics

- Structure and Function of Genes and Chromosome
- Laws of Heredity and sex linked inheritance
- 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

Practical component – 30 Hours

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.

Suggestive readings

1. Chadha K. L. 2012. Handbook of Horticulture. ICAR Publication, New Delhi.
2. Gopaldaswamianger 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. Vij, U and Gupta, R. 2011. Applied Zoology. Phoenix Publishing House, New Delhi.